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Autobiography and Memoirs of an Art Critic.

THE various works of Philip Gilbert Hamerton cover so much ground in regard to the criticism of Art and Life, and combine so many fine qualities both of literary genius and of artistic insight and knowledge, that one would be prepared to find the man himself as interesting a study as books. Indeed, the volume* which is occupied half with his autobiography, brought down to the time of his marriage, and half with the biography of the subsequent period of his life supplied by his widow, is fully as interesting as any book he ever wrote, and the effect of it is to give us the impression of a character more individual and remarkable than one had fully realised from his writings.

A good deal of the autobiography is occupied with subjects of social and personal interest, which it does not come within our province to enlarge upon; it need only be observed here that the narrative of the circumstances of his childhood includes a great deal which is both interesting and pathetic, not least so the portrait of his proud, stern and almost cruel father, whose principal or only virtue seems to have been his uncompromising honesty and love of truth, and who, with splendid and exceptional physical advantages of appearance and health, brought himself to an early grave by reckless convivial indulgence. Hamerton's mother died a few days after he was born; had she lived possibly a different impress would have been given to his rather wayward though loveable character. Another thing which must strike every reader of the autobiography, which was intended to be published only after his death, is the calm serenity with which he keeps that fact before him. Speaking of his father's funeral, he writes—

"I am the only survivor of that day's ceremony. The little procession has all followed my father into the darkness, descending one by one into graves separated by great spaces of land and sea. And when this is printed I too shall be asleep in mine."

Similar reflections, always in the spirit of one quite calmly contemplating his own death, recur more than once. An interesting and picturesque element in the book, too, is the account of his marriage with the young French lady who became his wife, and who, an inhabitant of Paris, French in all her social and domestic habits and sympathies, and unable at that time to speak a word of English, was taken straight away to her husband's painting-lodge, as it might be called, on the desolate shore of Loch Awe. That their married life was in the main one of happiness and mutual trust and affection is obvious enough from the biography, but we fancy the young Parisian wife must have had some rather trying days in the early period of her transplantation.

In the autobiography Hamerton observes, "I have been sometimes represented as an unsuccessful painter who took to writing because he had failed as artist. It is, of course, easy to state the matter so, but the exact truth is that a very moderate success in either literature or art would have been equally acceptable to me, so that there has been no other failure in my life than the usual one of not being able to catch two hares at one time." Hamerton's life was not a failure, but it seems nevertheless that the criticism he objected to was really not far from the truth. He was left well off when he came of age, and wished to pursue either literature or painting, because he thought (and wisely) that "a very moderate success in either of these pursuits would be more conducive to happiness than a greater success in some less congenial occupation." But he decided on painting, and went into the study of landscape-painting from nature with an earnestness and determination very unusual, making an encampment in a hut on a Yorkshire moor in order to study foreground and changes of effect with the scene constantly before him; and subsequently settled on the shores of Loch Awe with the same object, of living amid the scenery and studying it continuously. Yet the interesting and characteristic books in which he described his life and experiences in both these quarters formed apparently the only real success which he obtained from the experiment. We never happen to have seen any of his paintings; some few we believe have been exhibited; but he at all events never obtained a reputation through them, as a painter. In the course of two very interesting letters which he received later in life from Mr. Peter Graham, extracts from which are given in the biography, his correspondent pointed out what he believed to have been Hamerton's real stumbling block, viz.: that he had attempted a special branch of art without having had the requisite broad training in painting generally. In the second letter Mr. Graham wrote:—

"I think it unfortunate that you 'learned painting with a clever landscape-painter.' You probably far excelled him in sympathy with nature, power of observation, and all the gifts especially required for a landscape-painter. What you really needed, study under a figure-painter, or better still at an academy, would have given you. Landscape nature is too complicated to be a good school to acquire the mastery over the mechanical difficulties in art."

This is an admirable piece of advice which we quote the rather as it is worth the attention of all art students. Again, Hamerton acquired a thorough and even exceptional knowledge of the technical processes of etching, and produced what is far away the best and most instructive book on etching in the English language—it is in fact the book *par excellence* on the subject; and yet the only weak points in the book are the one or two etchings of his own introduced among the illustrations. And we get some insight into the reason of this from a passage in the memoir:—

"His main fault, as I thought, was attempting too much finish and effect, and I used to tell him so. He acknowledged that I was right, and when taking up a new plate he used to say playfully—'Now *this* is going to be a good etching; you don't believe it because you are a little sceptic, but you'll see—I mean not to carry it far.' Then before biting he showed it me with 'Look at it before it is spoilt.' It was rarely spoilt in the biting, but by subsequent work. Many charming proofs I greatly admired. 'Oh! this is only a sketch, you will see the improvement when I have darkened this mass.' Then I begged hard that it should be left as it was, and I was met by arguments that I could not discuss—'the effect was not true so,' 'the lights were too strong,' or 'the darks too heavy,' 'but *very little* re-touching was necessary,' and it ended in the pretty sketch being destroyed after having been re-varnished and re-bitten two or three times. When it was no longer shown to me, I was aware of its fate."

Hamerton was in fact a kind of victim to a foible which is peculiar to a certain sane class of clever and ardent men, of being taken up with perfecting the means rather than looking to the end to be attained. This

* Philip Gilbert Hamerton, an autobiography, 1834-1858; and a memoir by his wife, 1858-1894. London: Seeley & Co.; 1897.

peculiarity seems to have run through everything he did, except literature, and perhaps he was only saved from it in literature by the absolute necessity that came upon him later in life of producing books that would find a market, and finishing them in time for the publisher's demands; for unfortunately in later life his circumstances were much straitened (partly from causes over which he had no control), and he had to write for a living. Whenever a new picture was projected, there must be a new purchase of painting materials, always far more than were required for the work, to provide against accidents. A special cart or gig was designed and built for taking his painting materials about the country in the most complete assortment. He had a passion for boats and boat building, either with his own hands or under his own direction, but was never satisfied with the last boat, and had hardly finished before an improvement occurred to him to be put in practice in a new one. During the Loch Awe days two workmen were got over to build a larger boat than any before, at a time when the expense could ill be afforded, and when he was in fact very anxious about future means of livelihood, on the plea that it would be an economy in the long run, as the boat would take them and their things about much more conveniently, and save the occasional hire of conveyances or boats for special expeditions. All these things ran away with money without producing any compensating result; and his wife, whose memoir shows a touching combination of unvarying affection for her husband with a clear perception of his little weaknesses and peculiarities, obviously was made very anxious and uneasy by this impractical side of his character. As is sometimes the case, he combined with this continued expenditure on *matériel* which at the moment was not really necessary, an exaggerated passion for perfect order and system in his life. There were prescribed hours for doing this and that, there was a place and a pigeon-hole for everything. An amusing instance of this is given in the anecdote of a friend at the house who asked for a bit of string, and was directed to the pigeon-holes. He easily found the one labelled "String," but the string was too coarse for his purpose. "Look above," said his host. He did, and there saw another pigeon-hole with the label—"String (thin)."

It is curious that the first book which made a real success and got Hamerton's name widely known was one which had little to do with art, the one entitled "The Intellectual Life," and which appears to us to be his weakest book, though there was rather a new idea in it, and it appealed to a larger circle of readers than some of the others. But his really valuable work consists in his art criticism, using the word in its widest sense. His own practice in painting and etching, if it did not make him an artist himself, gave him an acquaintance with the processes and the difficulties of those arts which was most valuable to him as an art-critic. But the most valuable quality of all in his criticism was its entire independence of thought and taste. He was entirely aloof from, or above, any of the current fashions in art-criticism; he took his own view of things, and in several instances may be said to have almost alone spoken the real and sober truth on subjects on which there was a great deal of popular exaggeration on one side or the other. His "Life of Turner," first issued in the *Portfolio*, was remarkable for its calm and thoughtful judgment of Turner as man and artist; not without enthusiasm, but entirely free from extravagant adulation. He was for some years art critic to the *Saturday Review*, in the days when that publication was something of a power; and the value attached by thoughtful writers and artists to these criticisms is exemplified by a letter written to him by M. Véron, on the appearance of a review of his book "Esthétique," which he evidently immediately supposed could be by no other than Hamerton:—

"On me communique une revue très remarquable de la *Saturday Review* sur mon *Esthétique*. Ce qui distingue cet article c'est une sérieuse connaissance du sujet et une puissance d'analyse des plus rares. Cela ne ressemble en rien à ces généralités vagues et flottantes dont se contentent la plupart des écrivains que fait la critique dans la revue des journaux. . . . . Cet homme, je suppose que c'est vous."

The *Portfolio*, which was his own special foundation, set up a higher standard of Art-periodical than had before been seen in England; it is to be regretted that it seems rather to have languished since his death.

Though Hamerton had never attempted the practice of architecture as he did that of painting and etching (we feel quite sure he would have done so had he found time and opportunity), the practical turn of his mind, as evinced in his boat-building work, probably gave him a better insight into the practical side of architecture than is possessed by most non-professional men; and at all events the architectural criticisms and articles which he produced are as remarkable for insight into and sound judgment on the æsthetics of the art as his criticisms on painting. From one passage in the autobiography it appears that he had at an early age a great love for architecture, and that he also experienced that curious feeling as to the unity of the architecture and the music during a church service which affected Viollet-le-Duc at a still earlier age. The passage in which he refers to this is sufficiently noteworthy to quote:—

"We were taken to the services in Doncaster old church, which was destroyed by fire many years afterwards. Though not yet in my teens, I had an intense delight in architecture, and deeply enjoyed the noble old building, one of the finest of its class in England. Our pew was in the west gallery, not far from the organ, and from it we had a good view of the interior. The effect of the music was very strong upon me, as the instrument was a fine one, and I was fully alive to the influence of music and architecture in combination. The two arts go together far better than architecture and painting,* for music seems to make architecture alive, as it rolls along the aisles and under the lofty vaults. I well remember feeling, when some noble anthem was being performed, as if the sculptured heads between the arches added a noble animation to their serenity. Even now, the impression received in those early days still remains in my memory with considerable clearness and fidelity, and I believe that the habit of attending service in such a beautiful church was a powerful stimulus to my inborn passion for architecture."

We are glad to see it stated in the memoir that "it was a pleasure to my husband to see that his articles on the architecture of Paris had been so favourably noticed as to bring requests for contributions from the *Builder* and *L'Architecture*." We remember making the request, and Hamerton's modest reply, doubting whether he could have anything to say that could be of value to the readers of a professional architectural journal, though he was willing to comply when he had more time at his disposal—a period which did not unfortunately arrive.

Only Hamerton's intimate friends, probably, were aware of the great difficulties under which in the latter part of his life he carried on his multifarious work. Naturally of a very sensitive and nervous temperament (at an early period of his life he found it impossible to live in cities, on account of the want of quiet), he had become in his later years painfully affected by noise and rapid movement, a misfortune which came to a climax during a journey from Dover to London, when his cerebral irritation became so painful that he had to leave the train at a roadside station, and remain in the country for some time. For long after this railway travelling was impossible for him, though the endurance of it was gradually attained again by trying short journeys in slow trains until he had a little recovered his balance. But his health in latter years was a constant subject of anxiety, partly no doubt from want of sufficient mental rest among the numerous avocations which he continued to pursue so eagerly. He died at length suddenly and unexpectedly of heart disease.

The autobiography, and still more the memoir, leave one with the feeling that, with all the interest of Hamerton's various writings, the most interesting fact of all was Hamerton himself. He was a man eminently the reverse of commonplace; of the highest honour, of the most versatile perceptions and interests, full of the keenest love for and enjoyment of all that was beautiful in nature and art. If he did not accomplish the artistic aspirations with which he set out in life, he at least lived a life full of warm emotions and intellectual enjoyment, he came to be loved and appreciated by the best minds of his country in art and literature, both for his writings and his personal character; and, in spite of troubles from ill health and other causes, such a life cannot be called either an unhappy or an unsuccessful one.

* There is a reason for this which Hamerton omits to notice. Music and architecture are both abstract arts, which do not imitate anything; painting is an imitative art, in its basis at least.

MANCHESTER MAIN DRAINAGE.

TRULY the problem of the hour for municipal engineers and authorities is that of sewerage and sewage-disposal, and in no part of the country is a solution of the problem more necessary than in South-east Lancashire. The rivers and brooks of Manchester are literally sewers, while the Ship Canal has been forcibly, but accurately, described as a ditch. The labours of the Mersey and Irwell Joint Committee are, indeed, as arduous and appalling as those of Hercules in the Augean Stables. The sewage from innumerable towns and villages, and the refuse from all manner of manufactories, have been allowed to foul the streams so long, that the offenders had begun to think they had a right to go on fouling them for ever, and now consider themselves hardly used because a vigilant and impartial authority bids them cleanse themselves from the error of their ways. Even great Manchester bows before this authority, and attempts to set its house in order.

A long report on the Manchester Main

Drainage Scheme and Works was recently prepared by Mr. T. de Courcy Meade, the able "City Surveyor," and presented to the Council. It is largely historical, and shows—to one reading between the lines—how difficult it has always been to extort money for sewerage works. Undoubtedly the Fabian method of delay has its advantages; at any rate, the dilatory authority saves interest on the deferred expenditure, and profits by the failures of those authorities which are Quixotic enough to make haste to keep their streams pure and their people healthy.

Thirty years ago the prevention of floods in Manchester seems to have been a more pressing problem than the purification of the rivers, and somewhat curious powers were obtained by the Council in 1865 in order to increase the flow of water in the River Medlock. It appears that the riparian owners had very seriously reduced and obstructed the bed of the river, and the Corporation was empowered to execute various works for the improvement of the river, and to recover from the riparian owners two-thirds of the cost. The actual cost of the River Medlock improvements was 30,000*l.*, and of this sum a little more than 18,000*l.* was recovered by the Corporation—a salutary lesson to riparian owners in Manchester and elsewhere. The improvements, however, were not sufficient to prevent the recurrence of floods, and in 1874 Mr. J. G. Lynde, the City Surveyor at that time, recommended the construction of a tunnel 20 ft. in diameter for the conveyance of sewage and storm-water; a larger size—namely, 34 ft. wide by 21 ft. high—was subsequently suggested by Mr. Lynde, and adopted by the committee, but on reference to the Council, in December, 1874, the scheme was referred back to the committee "with a view to their reporting a matured scheme, providing not only for the safe passage of the storm-water of the valley of the River Medlock, but also for the complete interception of the drainage of the city." This was the commencement of the Manchester Main Drainage Scheme, or rather schemes. Two years later a report by Mr. Lynde and Mr. Bateman (who had been associated with Mr. Lynde in the work) was presented, but the Council was not by any means eager to act upon the report when it had been presented. Two years, at any rate, had been satisfactorily passed without any expenditure except for surveys and plans. Three more years were spent in fruitless negotiations with neighbouring Local Authorities for the purpose of agreeing upon a combined scheme. Meanwhile, Mr. Lynde had resigned, and Mr. John Allison had been appointed in his stead. In 1880 Mr. Allison thought it advisable that the sewerage works of various important towns should be visited, and that year and the next were agreeably spent in visiting Bradford, Leeds, Darlington, Carlisle, and Nottingham. The year 1884 was occupied by a sub-committee in the same manner.

Ten years had thus elapsed since the Council, with such a show of sanitary enthusiasm, had snubbed the Committee, and instructed it to prepare a "matured scheme." Neither the Council nor the committee was in any hurry. Sewage schemes take a long time to mature. In 1885 the committee reported the results of the visits to various towns, and received authority "to make further inquiries," and in the following year Mr. Allison presented a report on the proposed main drainage scheme, together with plans showing some alterations from the original scheme, partly necessitated by a considerable increase in the area of the city. Mr. Bailey-Denton was consulted, and advised some further modifications to be made, and in April, 1887, thirteen years after the Council's memorable resolution, the committee recommended that the modified scheme be carried out at an estimated cost of half a million; and the Council adopted the report. But not until 1889 was the approval of the Local Government Board given to the scheme, or the Rivers Committee instructed to commence the work.

Fifteen years had passed, the rivers becoming filthier every year, and not a yard of main sewer had been laid. The committee had not been unduly or officiously hasty in maturing the scheme. Then the Ship Canal complicated matters, and delays were caused in 1890-93 by the inclusion within the city boundary of numerous outtownships, and more money had to be borrowed in 1894 for the additional sewers.

In February, 1894, Mr. Allison died, and a few months later was succeeded by Mr. Meade.

Then came more alterations, and (in 1895) an overhauling of the sewers which were then in course of construction. This, perhaps, is one of the most interesting and instructive portions of Mr. Meade's report. Sewers were found to have been built of 4½ inch brickwork instead of 9 inch. Bricks had been laid without mortar. Ordinary bricks had been used instead of Staffordshire blue bricks. Bricks had been used instead of stoneware invert-blocks. Thousands of pounds' worth of work had been scamped, and had to be re-executed by the various contractors at their own cost. In one contract for over 2,418 yds. of sewer, no less than 1,413 yds. had to be taken out and reconstructed by the contractor. The underdrains of the filter-beds were found to have been "most improperly constructed, no attention having been paid to either the lines, levels, or specified method of laying," while the concrete effluent carrier had been made with "much less than the specified quantity of cement." The contractor was compelled to re-execute the work, and at length, after "considerable trouble, inconvenience, and seventeen months' delay," the committee obtained just value for its money. It is such disclosures as these which lead men to say hard things of the contract system, and to advocate the execution of work by municipal authorities themselves, without the intervention of a contractor.

The sewage (about 15,000,000 gallons daily) is conveyed to Davyhulme, and there treated with milk of lime and green copperas, from 5 to 10 grains of each per gallon of sewage. Precipitation takes place in eleven tanks, each 300 ft. by 100 ft. by 6 ft., and a small portion of the effluent is passed through land which has been drained and laid out for filtration purposes. Clearly the area of land is utterly inadequate for the quantity of sewage treated. Recently Mr. Meade recommended the construction of an effluent sewer sixteen miles long (to a point in the Mersey Estuary about three miles on the Manchester side of Runcorn), in lieu of attempting to filter the effluent. This proposal was adopted by the Council, but at a recent meeting an amendment was carried to the effect that the Council is of opinion that the obligations of the Rivers Committee will be fully met, and no public injury will accrue, by the proposed effluent conduit terminating in the river Mersey in or near the township of Thelwall, below Woollaston Weir. This weir is about three miles above Warrington, and is the highest tidal point of the river. Two reasons have weighed with the Council in making this change, the first being the usual economical one, and the second the fear that Warrington would object to the reduction of water in the river which would be occasioned by discharging the important volume of sewage effluent below that town instead of above it, as at present. But has it not occurred to the Council that Warrington may object to an avowedly impure, unfiltered tank-effluent being discharged into the river close to its gates? And will not the Mersey and Irwell Joint Committee have something to say about the matter? In the matter of sludge-disposal, Manchester is about to imitate London and Salford by carrying it out to sea in barges.

It must be gratifying to the inhabitants of Manchester to know that the long-delayed system of sewers is approaching completion, but it must also be disappointing to be compelled to admit that, notwithstanding the advice of expert engineers and chemists, the problem of sewage-disposal is practically as far from satisfactory solution as ever.

NOTES.

The Penrhyn Quarries.

THE debate last week in the House of Commons upon the subject of the dispute between Lord Penrhyn and his men was practically useless. It did nothing whatever towards ending the struggle. It was, perhaps, however, not altogether valueless in throwing some light on the working of the Conciliation Act of last Session. It is obvious from the tone of some of the speakers that Government interference will be resented, and it is clear that the Board of Trade will have to be prepared for a good deal of ill-natured criticism when they endeavour to mediate between parties who are not reasonably minded. In the case of the London and North Western Railway, each side in reality welcomed the intervention of the Board; it enabled each party to give up a position which it should not have taken up. But Lord Penrhyn equally clearly resented the Board of Trade taking action; and we are inclined to think that the Department, when they saw how opposed Lord Penrhyn was to their attempts, would have done well not to have pressed the matter further. It is doubtful, also, whether their sensible proposal that a representative of the Board should be present at a meeting between the opposing parties was within the terms of the Conciliation Act. But it was a reasonable and well-meant offer, and should not have been rejected by Lord Penrhyn in the very bad tone in which it was.

The Pioneer Light Railway.

THE first Order under the Light Railways Act has been secured by a Railway Company, thus realising the anticipation that the existing lines would be among the first to benefit by the new legislation. The Order is for a single line to connect Basingstoke with Chawton—a village situated about two

miles from Alton; and as it will pass through districts at present five or six miles from any railway station, it should prove of considerable service to the inhabitants. Further southward there are villages in Hampshire—such as Warnford and West Meon, places of importance in Saxon times, but sparsely populated now—which are still eight or nine miles from a station. At the statutory inquiry, held last week at Basingstoke by Lord Jersey's Commission, it was stated that the estimated cost of the proposed line was 66,700*l.*—which works out at about 5,500*l.* a mile. This is a sufficiently heavy figure to cause local bodies to consider well before embarking in similar enterprises, but no higher than was estimated by competent authorities during the debates which preceded the passing of the Act. After all, the working of these lines is, perhaps, likely to prove more successful under the direction of a railway company than if controlled by a body having no previous experience in this direction, and with fewer opportunities for economy in the matter of equipment after the railway has been constructed.

Painted Stele from Mycenæ. IN the last issue of the *Ephemeris Archaiologiké* (1896, 1 and 2), M. Tsountas publishes a monument which, as regards the history of art, is only second in importance to the famous Vaphio cups. The monument in question is a painted stele discovered in one of the tombs recently opened in the lower city of Mycenæ. The stele is covered with a coating of white stucco, on which the paintings are executed in colours, still vivid—yellow, blue, red. The design is in three tiers, of which the topmost one has unfortunately almost disappeared; but enough remains to show that three figures were represented seated on sort of thrones. In the middle tier are five warriors marching. They brandish lances in their right hands, and their bodies are completely protected from neck to knee by huge shields of the pattern seen on the Mycenæ vases published by Furtwängler and Löschke (plate 43). In fact, in pose, dress, and accoutrements the figures of these two designs are closely analogous. On the third are figures of deer. The difference of the shape of shields between those described by Homer and those found on Mycenæan objects is, it will be remembered, one of the chief arguments on which Professor Ridgeway relies in his paper recently published in the *Hellenic Journal* (xvi. i.) under the title "Which People Produced the Objects called Mycenæan?"

Montmartre. THE Société Archéologique of Montmartre is organising what will prove an interesting museum, containing whatever can be collected in relation to Montmartre, its history and its monuments. It is being installed in the new Mairie of the XVIII. Arrondissement, and includes a number of water-colours, engravings, and photographs of picturesque corners of the hill, as well as remains of sculpture and architectural detail, dating even from as far back as the Merovingian epoch; old pottery, jewels and insignia, and a collection of portraits of all illustrious "Montmartroises." This will not only be a collection of great interest in itself, but it is hoped that it may also suggest the formation of similar collections illustrating the history of other ancient quarters of Paris.

The "Union Artistique," Paris. THE club called the "Union Artistique" has just opened its annual exhibition, which contains some very interesting works. The majority are portraits; among these may be mentioned particularly a head of a young girl by M. Cormon, a portrait of an old man by M. Aimé Morot, a portrait of a cuirassier by M. Carolus Duran, and one of his best works, and a portrait of the Duc de Doudeauville by M. Bonnat, painted with a breadth and vigour of style which is almost overdone. A figure of an artisan, by M. Roll, and a rather mediocre "Nativity" by M. Gervex, are among other works exhibited. In sculpture, two sketches of heads by M. Puech, a pretty statuette by M. R. Verlet, and a Sphynx by M. Hugues, are the only exhibits of special merit.

Fire Risks at Electricity Works. MUNICIPALITIES which have taken up electric lighting are at present suffering from what they consider a very real grievance, namely, an increase in the fire insurance rates with respect to central station risks. To such an extent have they excited themselves that a special meeting of the Municipal Electrical Association was convened at the Westminster Palace Hotel on Thursday of last week. Councillor Pearson, of Bristol, read a paper in which he advocated that municipalities should become their own insurers; at first in part until a sufficient sum had been laid by, and then they could take the whole risk. This view was pretty generally endorsed by many aldermen present, and the Borough electrical engineers spoke vigorously against the insurance companies. To listen to them, one would think that the companies had made immense profits out of this kind of risk in the past, instead of having been heavy losers. Instead of abusing the insurance companies, would it not have been far better to have invited some representative of the companies, Mr. Heaphy, for example, and consulted with him in a rational manner as to the best ways of reducing fire risks? If the insurance companies will not insure central station risks at 9s. per cent., it is not because of their ignorance of electricity, but because it does not pay them to do so.

French School at Athens. THE French School of Archæology at Athens is to celebrate its twentieth birthday this spring. The occasion is to be marked by an international gathering of classical archæologists. This is to take place from the 25th-28th of April. M. Homolle, the Director of the School, intends at the same time to celebrate the conclusion of the Delphi excavations, which will then be practically complete. It is to be hoped that he will further mark the occasion by publishing at least some of the results of the excavations. Important inscriptions are given to the public with commendable promptness, but two years have now elapsed, and the interesting sculptures of the various "treasuries" are still inaccessible. The German Institute, to facilitate attendance at this French jubilee, has altered the dates of the Peloponnesos and island tours. The Peloponnesos tour is now to be from April 8-23; the island tour from May 5-13.

Art in Glasgow. "ART IN OUR CITY" is the title of an excellent address, both in a literary and artistic sense, delivered to the Architectural Section of the Glasgow Philosophical Society by their President, Mr. P. Macgregor Chalmers, and which now reaches us in a pamphlet form. It contains suggestions for the improvement of the city and for the promotion of the effectual study of art in Glasgow, which are well worth the attention of her citizens.

Belmont House, Hampstead. AT the instance of Mr. E. E. Newton, a member of the Hampstead Vestry, the Society of Arts agreed a few weeks ago, with the occupier's and owner's consent, to affix a memorial tablet upon Belmont House, Rosslyn Hill, formerly inhabited and, it is said, built by Sir Harry Vane, who was taken thence a prisoner to the Tower, as Ludlow relates in his "Memoirs." In Vane House, as it was then named, afterwards lived for many years Dr. Butler, Dean of St. Paul's, and author of "The Analogy of Religion," who two years before his death in 1752 was appointed to Durham. By his will of that year he directed that the house should be sold. The next tenant, a Mr. Regnier, divided the house into two; a later tenant, a Mr. Pilgrim, gave name to the adjacent Pilgrim's-lane. The premises have since undergone considerable alteration by way of adapting them for purposes of the Soldiers' Daughters' Home, removed thither about 1860. Bishop Butler fixed in the windows several pieces of old coloured glass, many of them bearing date 1571, and given to him, it is locally reported, by the Pope. Some of the glass, which is Flemish work, has remained to our own day. It mainly illustrated Scriptural subjects. It has been surmised that the similar glass at Oriel College, Oxford, is from the same source, or may have been taken thither from Hampstead after Butler's death. A view of the house in its former condition will be found in the *Gentleman's Magazine*, May, 1828.

The Grafton Galleries. THE exhibition of Madox Brown's works, at the Grafton Galleries, taken in connexion with the lengthy descriptive comments given in the catalogue, mostly written by the artist himself, forms a rather curious medley of literary and artistic impressions. Madox Brown's remarks on the scene between Lear and Cordelia (20) are admirable, but they are a good deal more interesting than the picture. And this is the kind of discrepancy we seem to find in many other instances. Madox Brown regarded painting from an intellectual and moral point of view, as the illustration or explanation of a historic scene; he took great pains to understand and to express the facts of the scene, but he too often failed to give natural life and action to it in the picture; the facts are all there, in a way, but they do not coalesce into a pictorial whole. In "The Expulsion of the Danes from Manchester" for instance, the Dane turning and shaking his sword at the inhabitants is a mere stage figure, carefully arranged in a suitable attitude; there is no life or reality in him. The elaborate painting called "Work" is a sermon rather than a picture; pages are written about its intention, but it is an absolute failure in a pictorial sense. Madox Brown's real successes, among the works exhibited here, may be said to be the "Christ and Peter" (43), "Cromwell at his Farm" (62), "Wickliffe on his Trial" (31), a picture much better in colour than many

others; "Juan and Haïdee" (48), "The last of England" (64), a truly pathetic though very ugly work; and the "Romeo and Juliet" (60), one of the most passionate love-pictures ever painted, and effective in proportion. If Madox Brown could have been content to "let himself go" in that way a little more often, instead of labouring to tell a story and point a moral in every line of his pictures, it would have been better for him and for art. Among the small works in the collection the little landscape entitled "Carrying Corn" (26) should not be passed over; it shows a wonderfully true and powerful effect of light.

The Metropolitan Railway.

IT is satisfactory to find that the Board of the Metropolitan Railway Company are apparently about to undertake in a systematic manner the general rebuilding of their stations. They state that the work which has been done at Moorgate-street will be continued at Bishopsgate-street. We hope that they will make haste to take in hand some of the more westerly stations. Gower-street and Baker-street stations are wholly inadequate for the traffic, and the badness of the station is made worse by the indifferent lighting. The Directors also mention that they are in communication with the Board of Trade in regard to the ventilation of the line, and will co-operate with the Departmental Committee which is about to be appointed. We have no objection to the company making a virtue of a necessity. But there can be no doubt at all that if the Government had not put pressure in the manner they have done on the company, all that would have been done by the latter would have been the making of one or two more vent-holes in the public streets. Considering that the Metropolitan Railway is now in a better financial position, it would be wise and prudent to take some decisive measures towards the better ventilation and the better lighting of the stations, and for the improvement of their rolling stock.

Mr. Gilbert on Architecture.

IT can hardly be said that Mr. Gilbert's paper, or rather short address, at the Institute of Architects on Monday, was equal to the occasion or the subject. Mr. Gilbert seemed to think that a promise to deliver a paper to the Institute was sufficiently met by a short rambling address, not well prepared, exceedingly vague in substance and expression, and of which the chief recognisable point seemed to be that the best architecture had been produced by sculptors who had undertaken to act as architects, while, conversely, architects who tried to be sculptors had been notable failures. We have heard this from sculptors before; whether it be true or not, it may be a question whether it comes very gracefully from the mouth of a sculptor; and Mr. Gilbert's replies to the speakers in the discussion, though very amusing, were somewhat too much flavoured by an assumption of intellectual superiority which occasionally bordered rather closely on impertinence.

ARTS AND CRAFTS EXHIBITION AT CHESTER.—On the 29th ult. an exhibition, under the auspices of the Chester Guild of Arts and Crafts, was opened in the Grosvenor Museum, Chester, by the Duke of Westminster. The exhibition comprises specimens of painting, wood-carving, leather embossing, carving, embroidery, tapestry work, modelling, and kindred crafts.

THE ADVANCEMENT OF ARCHITECTURE*:

WITH SOME REMARKS ON THE STUDY OF GOTHIC.

IT is now one hundred and twenty-nine years ago since the Royal Academy of Arts was founded by his Majesty George III. It was founded at the request of Sir W. Chambers, his architect, and in the charter granted by his Majesty, and dated December 10, 1768, it was provided that there shall be "a Professor of Architecture who shall read annually six public lectures, calculated to form the taste of the students, to instruct them in the laws and principles of composition, to point out to them the beauties or faults of celebrated productions, to fit them for an unprejudiced study of books, and for a critical examination of structures."

At that time, the tide of the Italian Renaissance was still flowing, although there were slight signs of reflux in the growing admiration for Gothic. Horace Walpole altered Strawberry Hill in the Gothic taste in 1750, while, in the very year of the Royal Academy's foundation, Milizia published his lives of the architects, in which the works of Palladio were held up as the standard of taste. The Dilettanti Society, in 1762, published the first volume of Stewart's "Antiquities of Athens," and subsequently the "Antiquities of Attica and Ionia," and is, I believe, still publishing works on Greek architecture. At any rate, the researches of Pullan on the Temples of Apollo Smintheus, of Bacchus at Teos, and Minerva Polias at Priene, or one at least, was published in the year 1881.

Wilkins published his "Antiquities of Magna Græcia" in 1807, Inwood the "Erechtheum at Athens" in 1827, Penrose the "Parthenon" in 1847, 1851, 1888. Sir C. Fellows published his works on Lycia, Caria, and Lydia, in 1839-1847; J. Pennethorne "The Geometry and Optics of Ancient Architecture" in 1878, Sir C. Newton and Pullan on the "Discoveries at Halicarnassus, Cnidus, and Branchidæ" in 1862-3; Cockerell and Donaldson their supplements to Stewart's "Athens" in 1830, and Cockerell his "Temple of Jupiter Paubellenius and Apollo Epicurus" in 1860; and in the same year Falkener published his "Classical Museum," not to speak of foreign publications. I need hardly speak of Hittorff's Restoration of the Temple of Empedocles at Selinus, 1851, nor of Abel Blouet's scientific expedition to the Morea and to Macedonia, 1831-1838.

There is no task more difficult than that of unravelling the causes of certain movements among mankind. And this is even more difficult when it is a purely intellectual movement. We speak of the Renaissance as if it were a change of taste that could be as precisely dated as a revolution or a battle, while it had been led up to for centuries, and we can only be certain of its existence and preponderance long after it had begun. In this case of the Greek movement, one prime factor in it was the enthusiasm of Winckelmann, who began to write on Greek sculpture when he was at Dresden, and afterwards published his history of ancient art about the middle of the last century, and he found sympathisers who had come to much the same conclusions before he wrote. From attention being called to the perfection of Greek architecture in 1762 and subsequently, a wave of Greek taste swept over most of the countries of Europe. The Elgin marbles were purchased by the British Government, and placed in the British Museum in 1816; even children who saw them were struck by the beauty of the Panathenaic frieze, and doubtless this revelation of beauty to the public prolonged the call for imitation Greek architecture.

The admiration, however, of Gothic increased in England partly owing to Sir Walter Scott's novels, and partly to the efforts of such men as John Britton, Rickman, the second Pugin; and to the enthusiasm of the Ecclesiological and other societies. This admiration became so prevalent as to strongly influence public opinion, so that in 1840 it was determined that the Gothic style should be adopted in the new Houses of Parliament. Even before this, the very champions of Classic architecture were so affected by the increasing admiration for Gothic that the great Wilkins himself dabbled in it, and Sir James Pennethorne and Professor Donaldson tried their hands at it. Decimus Burton, once a well-known Classic architect, who persisted in his creed was so far forgotten that, when he died a few years ago, his name and works were almost unknown.

A passion for the study of Gothic spread largely in society; antiquaries, clergymen, undergraduates, heads of houses, and other amateurs; architects, as well, employed their spare time and holidays in making notes on Gothic buildings in England and abroad, measured and drew out the mouldings of different dates, and a few of the more learned endeavoured to solve the mysteries of Gothic construction. In 1841 Professor Willis read an admirable paper at the Royal Institute of British Architects, called "The Construction of the Vaults of the Middle Ages,' really a treatise on Gothic stone-cutting, greatly admired abroad, and still studied by architects in this country; while the Gothic flame was still burning, fanned by Mr. Ruskin. In 1854-68 was published by that Cuvier of Gothic architecture, Viollet-le-Duc, his "Dictionary of Architecture," now of world-wide celebrity, which may be said to have completed the Gothic conquest. Casts of figures and foliage from the Gothic cathedrals and churches were collected at the Architectural Museum, and masons were encouraged to copy them; while during the professorships of Scott and Street at the Royal Academy Gothic was pronounced to be the only true architecture in the world; and that eccentric genius, W. Burges, was never tired of advocating its universal adoption. Casts of Gothic figures and foliage were collected at the South Kensington Museum and even at the Royal Academy. There was a long struggle between those who were getting their living by paraphrasing Classic and Renaissance buildings and by those paraphrasing Gothic buildings; hard words were bandied about, and "Pagan" and "Papist" were affixed by their opponents to the rival practitioners. A truce was at length concluded, and a practitioner was allowed to paraphrase Classic, or Gothic, or both, without having an offensive epithet bestowed on him. Students were allowed to compete for prizes at the Royal Academy, and at the Royal Institute of British Architects, in either style, much to the disgust of those brought up in the belief that Renaissance was the only admissible style.

Owing to the large increase of travelling, the publication of architectural works, and the multiplication of photographs, the desire for novelty, and the absence of any proper teaching, all phases of architecture from Greek days downwards, if we except the Egyptian Hall and Angelo's School of Arms, were in turn adopted. This produced two results. The first was this: that the public looked on architects as persons keeping an architectural costumier's shop, at which colourable imitations of every past style could be procured. The public still believes that Gothic has a stronger ecclesiastical flavour than any other style, and that Renaissance is more adapted for municipal buildings; so it has a Gothic architect for its churches, and a Renaissance one for its other buildings. Some of the wealthy and some of the eating-house keepers occasionally desire their rooms to form an architectural pattern book, each room being of a different style or phase of a style, a Gothic chapel, a Græco-Roman hall, an Elizabethan dining-room, a Louis XIV. drawing-room, a Louis XV. boudoir, an Early French Renaissance morning-room, a Roman library, and a Moorish smoking-room, with perhaps a Chinese, Indian, and Japanese room thrown in. The other result was that thinking men interested in architecture began to ask themselves what architecture was, beyond designing habitations or shelters for men and animals, factories for making goods, warehouses for storing them, and shops for selling them; why the buildings of certain countries, and at certain epochs, had always been admired; why the shapes and details of buildings at successive epochs were so different from one another; and why at so brilliant a period as this of the nineteenth century, when men's minds are so active and so restless, nothing but paraphrases of bygone styles were to be met with, even in important buildings. They soon saw that some of the differences in past styles were brought about by the greater number of men's wants, and by the greater complexity of society; that some were owing to an increased knowledge of materials and of their powers, and to advancement in the art of building. A good many thought that when every part of a building exactly answered its purpose, and when every redundance had been pared away, and each part took its shape according to the work it had to do, an architecture would arise of itself without further trouble, more wonderful, more perfect, and one that caused more exalted emotions than any that the world had seen; but it became

* Being the first Royal Academy Lecture on Architecture this session. Delivered on the 25th ult. by Professor Aitchison, A.R.A.

apparent that this was a wrong hypothesis. The wonderful iron structures of our engineers have surpassed all that was done before in the world in a scientific direction, without regard to anything but cheapness and utility; but nearly all their works are unsightly, and many of them are hideous.

It is just possible that if this hypothesis could have been perfectly carried out, it might have given the true solution; for we believe Nature makes her organisms in the best way and with the least possible material, while most of her works are beautiful. But we have not got her materials, her knowledge, nor her skill, and we are not sure, either, that she does not aim at beauty. Still, I think that most of our minor problems point to a solution in this direction; but the major problem seems to me to wholly depend on man, for it is not the purely necessary problems that are alone to be solved, but the proper emotions that should be excited, by the sight of the building. Solemnity, adoration, and thankfulness should be evoked by a temple; majesty by a building for legislation; awe and apprehension by law courts; dignity by buildings for public offices, great officers of State, and magistrates; magnificence in the mansions of merchant princes and great manufacturers; grace and delightfulness in theatres, concert, and fine-art exhibition rooms; comfort and comeliness in the houses for ordinary citizens; while the grimness of a prison should excite repulsion and terror; but beyond these master emotions, we want each part to exhibit the æsthetic cultivation of the day, and show not only the mastery of the architect, but the knowledge, the care, and the skill of the workmen.

The lessons of how these various emotions are to be raised must be learnt from those buildings of former times which show how cognate emotions were excited. The rest depends on the genius of the architect and the cultivation and aspirations of the best of the public.

A perfect architectural monument has much more human interest given it by sculpture and by figure painting than by pure architecture, while fine monumental colouring is another source of delight. Sculpture and figure-painting have for their highest models the most physically perfect human beings. If the figures created by these artists will not harmonise with the architecture, the architect must look to it; for his art is then below that of his brother artists, and the completed monument is patchwork. The serenity of high ideal sculpture or painting will not harmonise with coarse Romanesque nor with tormented Gothic; so you see that it does not depend on the will of the architect to adopt any past style he chooses, but the style is evolved from the necessities of the case. The rude figures of the Solomon Islanders would be as much out of place in the pediment of the Parthenon, as the Panathenaic frieze would be in a Norman cathedral.

I do not address you as persons anxious to get your living, and naturally the best one possible, by the exercise of a respectable calling, but as poets in structure, who not only hope, but desire, that the monuments you erect will call forth admiration and delight in the cultivated, hundreds or thousands of years hence, and who spare no study and no pains to ensure this result. What Milton says of fame is true; it is "That last infirmity of noble mind." If you feel the divine power within you, that will enable you to delight millions yet unborn, you feel that fame is but an unimportant accident. You must, however, not only "scorn delights, and live laborious days," but you must study as the poets have studied, and see how your predecessors learned to evoke the emotions that now delight you.

As I have addressed you as poets in structure, it will not be amiss to see how the poets in words inspired with the divine afflatus, have learned the elements of their art. Take Dante, or Milton, or Tennyson, and see how they studied all the best poetry of the past and of the present, how they mixed among mankind and studied the emotions of those around them, how they translated or paraphrased the poems of other times and of other tongues, to get their hand in and to learn their art. Some of you may object that such transcendent poets as Shakespeare and Burns had but little learning. You may be sure that both of them deplored it, and endeavoured to make up for their deficiencies by learning all they could from ancient story, from ancient poetry, and from contemporary work, and by the constant and piercing observation of the persons and things around them and by repeated efforts, make their works immortal. In our own art we see Brunelleschi, who was to become the great architect of his day, working as a journeyman goldsmith at Rome, so that he might measure and study the Roman ruins, and obtain from them constructive and æsthetic knowledge. In our own day we have seen Alfred Stevens getting his living by designing grates, tiles, and fire-irons, while he was learning to be a great sculptor, a painter, and something of an architect. Remember that above all things architecture is a structural art, and that all that you can do is to build; by that you must show your knowledge, your skill, and your aspirations, your manners and your morals, and as an architect, by that alone. You can, of course, avoid the study of tatics by getting examples of what has been done before, and keeping well within the old lines, but this is not what the Roman, the Byzantine, or the Gothic architects did; their aim was to outstrip their predecessors. It is not the method our engineers have adopted whose works are the wonder of the world; they learnt as much as was necessary of that part of science that underlies their practical work, and taking iron as their material, have immeasurably surpassed all that was done before them in construction. They never would have done this if they had merely feebly copied the engineering works of the Romans. All the sciences have so far progressed that the knowledge of them amongst the ancients is only mentioned in archæological treatises. The mechanicians who have perfected the steam engine, invented the locomotive, the spinning jenny, the power loom, and the lace weaver, laugh to scorn the childish machines of the ancients; the artillerists are not contented with balistæ and catapults; the astronomers are not humble students of the Almagest of Ptolemy, but have discovered that the earth is a small planet revolving round the sun, that the laws of gravity control all the celestial bodies in the visible universe; and have learnt that most of the substances found on earth exist in the sun. Nor do geographers speak much of the knowledge of the earth to be found in Homer and the Pentateuch, or in the works of Strabo, and Pomponius Mela.

In art, however, there is a very different story to tell. The arts may be said to appeal to the emotions through the eye and the ear, and the accumulated knowledge of them does not help us beyond a very limited distance. When accurate modelling has been attained, there is little more to be learnt except how to create ideals that are, in certain respects, more perfect than the average human being. In drawing, when form can be exactly copied, and when that knowledge of perspective, called fore-shortening, is attained, there is but the composition of line and grouping to be added; the rest depends on the imagination of the artist, whether it be to create allegorical figures, or scenes from the past. In colour there is the harmonising and contrasting of the different tints and tones to be attained, and the choice of those most appropriate to the subject of the picture, and the imitation of such subtlety of mixed colouring as is found in the nude human form.

We have no reason to believe that after the Greeks had cultivated gymnastics the human form has improved. Landscape painting may have improved, as the forms and laws of inanimate nature are better known and observed, but we have no reason to believe that the beauty of inanimate nature has increased. Ordinary emotions have become more complex, but this can hardly be the case with the grand ones, such as ecstatic joy, heartrending grief, terror, and despair. Is eloquence, wit, humour, or pathos, more common or more forcible than in the best ages of Greece? I think almost the emotions, being now more complex than of yore, have become more difficult to portray, so that if the modern artists portray them with an effect equal to that attained by the great Classic artists, they must be greater men.

Music is said to have progressed, and if so, it has a merit beyond the other fine arts; but, not being musical, I cannot judge. Some of the musical critics still hold that for evoking religious emotions the Gregorian chants are as yet unsurpassed; so it may be that Aristoxenos is as superior to the modern composers as the Classic artists are to those of modern times; supposing that he was a composer as well as a writer on music.* Browning, Tennyson, and Mr. Swinburne, though they studied the Greek and Latin poets, are not mere humble imitators, but have tried to embody the vicissitudes and emotions of the present day in their verse, in the hopes that their poems may hold their own in comparison with the masterpieces of the past, if not surpass them. We hope the assertion is no longer true that

> "Old poets outsing and outlove us,
> And Catullus makes mouths at our speech."

A poet only can give us a chance of testing the truth of this saying; he alone has that accurate knowledge of the value of his own tongue which we all try to attain, and the gift of harmony and rhythm. Few have that intimate knowledge of Greek and Latin that would enable them to judge of the relative excellence of classic poetry. Mr. Swinburne would confer on us an inestimable boon if he would give us in his verse a few translations of the most beautiful passages of the Greek and Latin poets.

It would be amusing, if it were not so melancholy, to see with what a light heart the architectural students treat the master art they follow, every one of whose three or four branches is transcendental, *i.e.*, each one may take the whole life of a man to master, and requires genius as well, to enable any one to surpass the ancient masterpieces—I mean planning, construction, proper emotional excellence, and healthfulness; yet after three years passed in an architect's office each student feels himself competent to practise if his friends can get him work. Sir John Soane's retort to a young architect is apposite. The young architect said, "I ought to understand architecture, for I was articled to it for seven years." "The time it takes to make a cheesemonger," was the reply.

When I see the long hours and the long years devoted by artists to drawing or modelling a human figure and to the study of anatomy, and know that even then he has but the elements of his art, and may want the divine gifts that are required to make an artist, I am almost in despair at the prospects of architecture; still, there is hope for the future in the fact of architectural students having their eyes opened to their own ignorance, which, through the teaching at the Architectural Association, they are trying to dispel. I was pleased to see a young architect working out models of masonry at the schools of the Associated Guilds in Titchfield-street. I am doing my best to dispel from the students' minds the notion that the paraphrasing of dead styles, is architecture, that it is more than the means of learning how to express themselves architecturally.

Sketching in perspective is no doubt a charming accomplishment, and the young men of the present day have progressed wonderfully in this art, and, though it is not without its value as a means of cultivation, still it can never teach them architecture. When I look at the sketch-book of Willars de Honeccurt, the French architect of the thirteenth century, I see that he was a man who could sketch but poorly; at whose efforts an accomplished draughtsman of the present day would laugh: but Willars could design a cathedral, and see it properly carried out, and he could do this so well that he was sent for to Hungary to build one there. The art of sketching is like making a coloured sketch of the painted decoration on the soffit of a vault, useful enough as a memorandum of the excellent effect produced, but affording no information as to how the effect is obtained; to get that information, the student wants a scaffold to see the actual colours used and the methods of using them, to produce the desired effect one or two hundred feet from the eye.

Although Greek architecture is the most perfect the world has yet seen, in which everything is studied with endless labour, and treated with supreme ability, so that a whole building, and each part, answers as perfectly to the intention of the architect as the strings of a fiddle respond to the hand of the musician, it is absolutely without effect in this dull and misty climate, at least for the greater part of the year, and our brightest sunshine never produces the results obtained in its native country. In Greece the sunshine plays endless symphonies on it from daylight to dark.

It is doubtful if we can ever again have such complete simplicity, owing to the number of modern wants, and the complexity of modern society; still, let us study it deeply, and take to heart the lessons it so strongly enforces, of aiming at simplicity if we hope to attain the sublime. Every architect feels that he could design the Parthenon, if it had not been done before; though in this respect he is absolutely mistaken, for to attain elegant simplicity is the most difficult as well as the highest achievement of art. To make architecture simple and expressive,

* The modern art of music can hardly be said to have begun till the fifteenth century. Since then it has progressed and developed, and come to its decadence, very much in the same kind of sequence followed by the art of painting two or three centuries earlier. There is nothing exceptional about its position. What was called "music" by the Greeks was a totally distinct thing from the modern art of music as we know it.—Ed.

and lovely when loveliness is wanted, is the aim of most architects, and should be the aim of all; but for the architect to find out how to attain this in his particular work is the greatest difficulty, involving as it does the greatest efforts, as well as supreme genius. In comparing Greek with modern architecture it may be said:—

"We shift and bedeck and bedrape us,
Thou art noble, and nude, and antique."

Some pessimists say we can do nothing but paraphrase until the present civilisation of the world is submerged by a flood of savages; yet surely this is not a necessary consequence. We see that the Romans, when almost effete, when cruelty and corruption seemed hardly able to go further, managed to develop a style that equalled, if it did not surpass, the best work done in the Gold and Silver Ages of the Empire. This fact alone ought to banish despair. Let us all combine our efforts to set architecture on its feet again, and if we can do this, I think we may be sure that the new phase of architecture that results will be a credit to our age and to our country. We should recollect that we are still, in the main, a courageous, honest, industrious, and enterprising people, and I hope we are also beginning to be a tasteful people, and may hereafter make the boast of Perikles that "we love the beautiful." Wealth is the result of the virtues I have enumerated, and we should neither decry nor abuse this wealth, but learn how to use it properly for the instruction and delight of the world and for the honour of our country.

I have touched, in former lectures, on the merits and peculiarities of Greek, Roman, Byzantine, Saracenic, and Romanesque architecture, and I now propose to give you some remarks on Gothic, not as Mr. Ruskin once said, "to put into a storehouse for use, but into a gallery for study." I think it will not be amiss now to show you some masterpieces of Romanesque and Gothic after the Parthenon, for all subsequent architecture is a lineal descendant from the Greek.

I think, nowadays, few will deny that, though Gothic is very far from having attained the perfection of Greek architecture, even if it attained to the dignity of Roman, it has been able to raise emotions of, perhaps, a loftier sort than those raised by any other monuments; it has given us lessons in composition that, at least, are different from those to be learnt from any other architecture, and has shown to what perfection construction in stone may be carried. One of the æsthetic triumphs of late Gothic is the effect produced by pierced work in stone, which is certainly different from anything west of India, and it made another stride in the logic of building. The Greeks, and the Greeks alone, studied how to gain the utmost effect in their buildings from brilliant sunshine in a clear air; every moulding was adapted to that end with a perfection that indicates the most profound study corrected by experience and failure. The Gothic architects had neither the clear air nor the brilliant sunshine; as a rule, the atmosphere in which they built was always more or less misty, and their sunshine, where they had any, was feeble; so they set themselves to work in the most logical way to see how effects might be obtained in the mist by deepening shade, by strongly accentuating the parts that took the light, and by perfecting outlines to be seen against the sky.

That severe restraint that the Greeks imposed upon themselves the Gothic architects were not cultivated enough to practise, even supposing that they were sensible of the matchless beauty of Greek architecture, which is most improbable; for, apart from their professional knowledge and skill, the bulk of them were probably ignorant and uncultivated men. As late as the fourteenth century, the French architects, the Bons, the designers of the Porta della Carta and the Ca d'Oro at Venice, were merely designated as stone cutters (*taglia de tietra*). It is scarcely likely that these Gothic architects, who had at their fingers' ends a new development of architecture, who had surpassed the Romans in the height of their buildings, and had nearly equalled them in the spans of their vaults, and were revelling in intricate geometrical forms, should have been captivated by the massiveness and simplicity of Greek architecture. They probably despised the constructive ignorance of the Greeks and their lack of ornamental geometry, and what they looked on as the absence of interesting detail. The Gothic mouldings were, in all probability, the result of the architects' efforts to gain the effects they wanted in their own climate. If you exclude square mouldings, such as the fillet and fascia, the Greek mouldings were the bead and torus, the quarter round, the ogee, and the hollow, and, in late work, the Cyma recta; each one infinitely varied, as the case required, but rarely departing from the generic form; and in their best Doric work a very few even of this restricted number of mouldings were used: while in Gothic there were hundreds, if not thousands, of mouldings used in a great abbey church or in a cathedral. It was, therefore, impossible to bestow much time on their elaboration.

I may here say that I use the word Gothic in its common signification, as the laymen's art that sprang up at the end of the Romanesque period of clerical art, about the middle of the twelfth century, which, for easier recollection, we call the art of the thirteenth century, to its extinction in the early part of the seventeenth century.

I may also say that I do not propose to investigate Gothic archæologically or philosophically, though both sorts of investigations are profoundly interesting. I am going to treat it practically; that is, to see what lessons we may learn from it for present use. Many get their living by being able to copy or paraphrase Gothic, and though the desire of getting one's living is very praiseworthy, it will scarcely help us directly in advancing the art of architecture, which is the one thing to be most earnestly desired and sought after. I hope I may enlist you in this quest, for surely nothing should be more desired by architects than to see architecture again a flourishing and progressive art, expressing all the main characteristics of the wonderful epoch in which we live, and meeting the desires and raising the admiration of the most cultivated people of this epoch.

When the public realises what architecture does for a nation, even for a town, it will be treated with greater respect, and the architects will be more cherished, admired, and honoured, and will thus be stimulated to make greater exertions. It must be borne in mind that it is an obtrusive art. In a town it meets you at every step, and cannot be hid away like a book, a picture, a statue, or a musical instrument. If it be real architecture, and produces the right emotions that the building should excite, it makes that building at once deeply interesting. It proclaims even in an ordinary street the relative dignity and taste, the occupation, or the liking of the owner—that is, supposing he has had it built for himself; while if it be a public building it bespeaks a higher or more important office, and in both cases causes admiration for the care, thought, and invention bestowed upon it. At the same time it shows the character and condition of the nation at the time it was erected, and is a permanent memorial of the cultivation of the people. No reflective person can see any kind of architectural monument without it giving him a notion of the people at the time it was built; its gables, pediments, domes, spires, towers, lanterns, and pinnacles diversify the sky-line and give interest to it; it tells of an expenditure of wealth and labour, of skill and invention, and gives us a sort of epitome of what the people once admired. It is full of lessons of the most important sort that we can hardly miss, while many buildings fill us with delight from their beauty. We know little of mediæval times, and we should know much less, were it not that mediæval buildings are dotted all over the country. Architectural monuments may be ruined or pulled down, but except in the case of the very small ones they cannot be moved, and if they are beautiful, lovely, sublime or frowning, they attract persons from all parts of the world to see them, or as students to study them, and when at last, in the vicissitude of ages, the nation that built them becomes insignificant, or is swept away, they still remain as landmarks to show how rich, powerful, scientific, and tasteful it once was. How little should we know of Egypt, of Babylon, or Nineveh, of Mexico and Peru, and how much less should we think of their former power and greatness, if all their colossal buildings had been destroyed. Should not this reflection appeal to the patriotism of nations, and induce them to foster architecture and to honour the architects? and should not the same reflection stimulate the architects to hand down to remote posterity in enduring monuments the greatness and cultivation of their time?

VILLAGE HALL, ST. NICHOLAS, CARDIFF.—A village hall has been erected, at a cost of 1,200*l.*, at St. Nicholas, on the main road to Cowbridge. Built of Duffryn stone, and covered with red Broseley tiles, the building consists of a hall capable of accommodating 250 persons. The architects are Messrs. Lansdowne & Griggs, Newport, and the builders, Messrs. Horton & Co., Chepstow.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

THE SCULPTOR'S ARCHITECTURE OF THE RENAISSANCE.

AN ordinary fortnightly meeting of this Institute was held on Monday last at No. 9, Conduit-street, Regent-street, Mr. Alexander Graham, F.S.A., Vice-President, in the chair.

The Royal Gold Medallist.

The Chairman announced that the Council proposed to recommend that, subject to the sanction of her Majesty the Queen, the Royal Gold Medal be presented to Mynheer P. J. H. Cuypers, of Amsterdam, for his executed works as an architect. It was the opinion of the Council that this year the medal might be awarded to a foreign practising architect. Mynheer P. J. H. Cuypers was the leader amongst architects in Holland, and, as would be seen from a little catalogue of his works, he had been practising for nearly fifty years, his labours having extended to nearly all kinds of architectural work.

The Chairman also announced that a visit would be made on Saturday, the 6th inst. (to-day), to Peterborough Cathedral. The number of the party was limited to thirty, and twenty-one members of the Council and others had already announced their intention of going. In conjunction with this matter, the Council at a recent meeting passed the following resolution:—"That the Council, having fully considered the matter of the restoration of the west front of Peterborough Cathedral, are of opinion that it would be inexpedient for the Institute to take any public action therein."

Mr. Alfred Gilbert, R.A., then read a paper on "The Sculptor's Architecture of the Renaissance."

Mr. Gilbert said that the subject of his address suggested very much, but his remarks were intended as suggestions for inquiry by his hearers. In the days of the great artists of the Renaissance, art was in her re-birth: it was no age of assertion, but of endeavour; it interested, enchanted, and lured them, therefore, to inquiry. Why were they present that evening to discuss the architecture of sculptors of a past age? Surely it was because they recognised in certain works which held them, which puzzled them, the handiwork of a class of individuals who, though cunning with their tools, were yet children in the use of the T square and the set square of modern times. A study of the methods of those men was refreshing, not to say restful, in these days of hurry and materialism. The very title of his address would be a wonder to most, an astonishment to many, and to not a few an anxiety. Sculptor-architect! Architect-sculptor! Where was the difference?—and yet, what a difference existed! Add the magic word "Renaissance," and the query was almost immediately answered. The sculptor-architect at that period was still alive, but the architect-sculptor—his existence was really not a matter for their inquiry. He probably existed despite the fact that his efforts formed less of a phenomenon than those of his brother craftsman. How came this so-called sculptor-architect into existence? At the memorable period which they were considering, despite the desire to create a national architecture, there seemed to have been little attempt on the part of the architect of the period to realise anything beyond a more or less free revival; of imitation or adaptation of classic models examples were not wanting. The sculptors, though imbued with the same spirit, had fewer examples of the finest in their art. The glories of Phidias were unknown to them, but the source from which he drew his inspiration was open to them daily in their studies from nature in all her suggestiveness. The architects were hard at work as students of antiquity, striving to resuscitate and imitate, while the sculptors were yearning to create—indeed, to give to future generations the true impress of their own lives and time, and not that of a remote age, with which their admiration and not their actual sympathies were in accord. Was it to be wondered at that, under such conditions, the sculptors of the period should long for licence and liberty, and a larger field for their invention, and that they should venture to essay the provision of accompaniments to their own work, and then, greatly fascinated by the vision of possibilities which had been revealed to them in their endeavours in structural art, should carry their ambition still further to attempt the creation of the very forms they had been called upon to decorate? In short, to govern, instead of being governed? This, to his mind, though he put it forward tentatively

and as a suggestion, supplied the origin of the most remarkable phase in the history of the Renaissance. And since the influence of it, spreading as it did through Europe and inspiring such works as were to be found in all the great centres of art, was manifestly so great, he thought that if more attention were given to the study of those productions much good would result, and there would be some hope of the next generation placing themselves, through their works, in the independent position of those artists of the Renaissance whom they admired, and whom they had every inclination merely to imitate. But Art was not imitation, but creation; and, above all, it recognised no specialities. Those were the wares of the pedlars of Art—the purveyors of trifles. That was evidently recognised by the men of the Renaissance, and it was not to be wondered at that in an age of sumptuousness and magnificence, such as was that of the Renaissance, when employment was not lacking and encouragement was intoxicating, that the striving to excel should have become a passion—that the ambition to build palaces should have taken the place of the former tendency to ornament palaces already built? In fact, that the sculptor should have aspired to bind his own art with that of the architect, and place himself above the position of journeyman decorator to a master adapter; and, furthermore, to work on lines founded upon his own conception of the spirit and traditions of the art of his predecessors, strengthened by that intense craving to create for himself. So far, he (the speaker) had endeavoured to trace the possible origin of the existence of the sculptor-architect, and he would now refer to his work. He was not prepared to claim for it a striking pre-eminence when directed simply to the erection of edifices. In examples which they all knew as the productions of sculptors there was undoubted evidence of the hand and mind which had been trained for the practice of the plastic art. It was rather in the treatment of ornament, when combined with purely architectural forms, that he felt inclined to favour the sculptor in his dual capacity. The sculptor had been used, before his usurpation of freedom, to design and execute ornament for building in which he had had no hand, and to his employer his ornament meant so much decoration, while to him it was the expression of an idea. A knowledge of this peculiarity fitted the sculptor for the task he was about to undertake. Another qualification which was his, and which we must not overlook, for the outcome of it was so marked a feature in all the productions of the sculptor-architect of the Rennaisance and the period immediately following, was the training he usually received in the art of the goldsmith. To that must, no doubt, be attributed that extraordinary freedom of treatment, that abundance of invention, and that accuracy and delicacy of execution—to say nothing of the sense of colour and light and shade and due appreciation of proportion which characterised their work. With the freedom thus obtained, the knowledge of their particular tasks, and with the fire of their new ambition, no wonder their productions were what they were. In regard to the desirability of young architects and sculptors studying the art of the Renaissance, such a study could not fail to impress upon them the grandest lesson that could be learnt, viz., that it was a duty that every artist owed to himself, his art, and his generation, to endeavour to place himself beyond the reproach of being a mere imitator of masters and styles of a past age. It was the spirit of the age and not the letter which he should accept, and he should worship it and bind himself to the obligations which its mere influence should place upon him to endeavour to pass on to posterity the rich legacy, further enriched by the imprint of his own time and his individual judgment. Art was a very old republic, and to it had been given the grand secret, the elixir of life—that secret which for ever had been denied to man. Art was as young to-day as it was centuries ago. Its existence was a curious mystic one—at once retrospective and progressive. Its every movement forward was a reflection from the mirror of the past. Its life was a constant reflection backwards and forwards in the mirror of ages. Its future was written in the magic word "tradition," and this word, with its mighty significance, would ever remain the "Sesame" of Art's every onward movement. It was the spirit and traditions of Art's great principles which must govern them, that they might grasp the inspiration in their time, and through their own individuality, before they could hope to hand on, much less to realise, the important legacy that they had from those who sought to be more than mere specialists, journeymen-decorators or master-adaptors. In conclusion Mr. Gilbert said that he had miscalculated his time and had miscalculated his would-be effort. He had counted only upon the hope that what he thought was more than it appeared to be, would inspire them to a discussion, which, as he had already said, would be more faithful than any words of his. He begged the pardon of his hearers for letting them off so easily, and he prayed them to co-operate with him in helping him to make what he thought would have lasted much longer, last long to their profit.

Mr. Alma Tadema, R.A., in proposing a vote of thanks, said that the paper was full of theories of the highest aim, which made him dream of all the beauties of the Renaissance, and all that time of the revival of the antique, without giving him anything positive to say beyond admiration for those beautiful things, in the light of which we were daily feasting, and from which we daily profited in our life. That time that was so fruitful for mankind in every direction, was for Art, of course, an everlasting source of study, and to be brought to admire that which was worth admiring was always a reason for feeling full of gratitude. What the influence of the sculptor-architects and architect-sculptors had been was a thing which he should like to see more developed in the modern practice of building. He should like to see the Arts more clasping hands together, the architect being a little more of a painter and a sculptor, and the painter and the sculptor being a little more of the architect; then they would be more complete; and any effort that was made to direct them in that way they accepted gratefully.

Mr. J. M. Brydon, in seconding the vote of thanks, said that it must be apparent that we had arrived at some progress when it was possible that a discussion of that kind should have been inaugurated in that room, when they remembered that not many years ago the architecture of the Renaissance was treated as something to be scouted, and that anything approaching such a matter as was done in St. Paul's was considered far beneath anything done, say, in the thirteenth and fourteenth centuries. It was not so long since that room re-echoed to the cheers that greeted papers on Gothic architecture, and it indicated progress that they had got to look with a lenient eye on the work that came after it in England. Mr. Gilbert's paper had been very suggestive in many ways; he had told them what a meaning there was if they liked to look under the surface in the workings of that great artistic phase in the period of men's minds that passed over Italy in the days of the Renaissance, and produced works that we all admired. His immediate purpose was to talk of the architect-sculptor; but it was very difficult to draw the line; it was a question whether they were not architect-painters, because more or less they were painters as well as sculptors, and sculptors as well as architects. But there were one or two names that did stand out as sculptor-architects, and one of them was Michelangelo. He was a great painter and a great sculptor, and he was a great architect, although he (the speaker) did not say he was the greatest architect of the Renaissance, and they would find this characteristic in his work, that he looked upon architecture from the sculptor's point of view—naturally the decorative side of it obtained over the constructive side. If they looked to his early work, *e.g.*, the San Lorenzo Library, Florence, or the Chapel of the Medici, they would find that (he was not saying anything derogatory to the sculptor-architect in this) it arose, probably, as Mr. Gilbert had said, from the sculptor having an ambition to create the work he was to decorate. They saw the genesis of that in the staircase of the San Lorenzo Library; if they looked round the walls of the room, the columns that decorated it merely decorated it; they were not constructive in any sense of the word; they were set in recesses in the wall and merely formed objects of decoration; they did not even supply the place of the decorated pilasters so dearly loved by Palladio and some of the later architects, the object of which was to support the entablature. But apart from all that, Michelangelo was a great architect, and one of the things that he did, which redounded to his everlasting credit, was the saving of the façade of the Farnese Palace which he completed at Rome. So far as they could gather from San Gallo's original design, the top was to be completed by a series of pilasters, but he died before the building was finished, and Michelangelo was called in to complete one of the greatest monuments of the very best period of the Renaissance of the sixteenth century. He designed the magnificent cornice which pulled the building together. If he had never done anything else than that, he thoroughly grasped what was required of him as an architect. Putting that enormous cornice on that building saved it from being a repetition of one story upon another, and from being commonplace. That was the work of the sculptor. They might say it was decorative work, but it was also constructive work, because it was the finish of the whole, and the support of the roof to some extent; and therefore Michelangelo there showed himself to be endowed with the attributes of an architect in being able to clothe with beauty a feature that was absolutely utilitarian. Sansovino, again, was an architect who was also a sculptor. He designed the Library of San Marco at Venice, which was a sculptor's façade, as against the architect's façade on the other side of the Piazza, which was purely constructive. The Sansovino Library was distinguished above all things by its sculpture, which was, he would not say obtruded, but brought into decorative prominence, which perhaps only a sculptor would have made of such importance. When he had to add a small story over the main building of the Library, he did it by enlarging the frieze, and putting very small windows into the frieze, united to each other by a band of sculptured ornament, as had been done to a certain extent in the Carlton Club in Pall Mall. This again was the characteristic of the sculptor, and Sansovino was a sculptor of considerable eminence, though not such a giant as Michelangelo. He (the speaker) hoped we were getting back to the time when sculptors and architects would feel that a building was not complete unless they worked together. It seemed to him that the greatest future of our English sculpture, and, he thought, of our English architecture, would be found in the decoration of our great public buildings by the sculptor and architect in harmony with each other. He did not agree with Mr. Gilbert that the architects in the age of the Renaissance were all adapters. They were not there to discuss the relative merits of the different architects who contributed to that vast movement, which extended not only to sculpture and painting, but to everything else. There were some greater architects than sculptors; he merely mentioned two, Bramante and Peruzzi, who were peculiarly architects without being sculptors, and carried out the idea of architecture, in the sense of a constructive art, as it ought in the first instance to be, more completely than sculpture.

Mr. Beresford Pite, in supporting the vote of thanks, said that some of them regarded Mr. Gilbert as being in many ways a typical example of the combination of architectural art with the art of the sculptor, and they therefore welcomed his presence and assistance in a very special manner. He (the speaker) suggested that architecture and sculpture were in a particular sense in these days in need of each other's ideas. He was afraid that any usefulness in this exchange would not be arrived at by the architect trying to combine the sculptor with his work, any more than it would have been if Michelangelo had called in an architect to assist him in the design of St. Peter's. An architect suffered from a complaint that the sculptor did not, and the sculptor suffered from another complaint (he was going to say homeopathically) from which the architect did not suffer, and the conjunction of these two complaints might produce a very healthy state of design. An architect was fettered by a large number of facts, by the lines he draws, by tradition from his fathers, by his Orders, by his plan, by a number of constructive circumstances, problems, and difficulties, with which he was bred and which practically became part of the bone of his artistic soul. He could not get free of his traditions, he would have to unlearn everything and start again if he was to think of his problems from the point of view of the sculptor; and in the same way the sculptor suffered from the loss of these restrictions. The sculptor's art was too often merely an effort to create an idea out of nothing: a statue which suggested that a boy had just thrown a stone, or a maiden was listening to a bird, or that Love was standing in the moonlight. Such ideas were played out; they had had their day, and the public had enjoyed them and the sculptor—he hoped profited by them; but he thought the time had arrived when the introduction of a little architectural vaccination into the arms of the sculptor and the infusion of a little sculptor's blood into the veins of the architect might produce a mongrel sculptor-architect or architect-sculptor of a distinctly strong breed. Mr. Brydon

had introduced Michelangelo to them as a great architect, though not, perhaps the greatest architect of the Renaissance. He should like very much to ask who was the greatest architect of the Renaissance?

Mr. Statham: Brunelleschi.

Mr. Pite: Could they separate Brunelleschi altogether from the sculptor's surroundings and training? Could they compare Brunelleschi with Michelangelo? Michelangelo found a singular pleasure in taking an architect's facts and features and treating them as if he were treating the facts and features of the human figure; he took masses which he found provided for him by the architect and threw them together, not with reference to construction or decoration, but with reference to the sculptor's idea of strength, of vigour of line, of delicacy, and of contrast of light and shade, as they would see if they looked at that staircase in the Library of San Lorenzo. He did not believe that it proceeded from the hands of Michelangelo; he believed the man who designed it was Vasari, who put the curved lines in the steps because he fancied, like Hogarth, that there was an esoteric beauty resident in the ogee curved line. There was nothing of that sort in Michelangelo; he scorned it in his figure work as in his architecture. Could not they, as architects, take up with some amount of zeal the sculptor's materials and tools and work with them, and could not they find the same pleasure in sheer massing of light and shade, in sheer contrasting of strength and delicacy, and in the sheer treatment of the features for their artistic elements rather than their constructive elements? It might sound heretical, but he fancied that Wren had a great idea that all he wanted was massive force when he piled up the mighty wall around that great dome, and when he formed that delightful colonnade round the dome externally which bore no architectural connexion to the Cathedral at all, and when he put and divided into masses its recesses, for the sculptor's reason simply because he liked the contrast, the play of light and shade. Coming down to our own time, we found in the work of Alfred Stevens a wonderful illustration of the way that another genius took up architectural forms and, he was going to say, threw them about. His Wellington Monument was enough to make the hair stand on end when they looked at that sweeping curved pediment springing off the very corner of the cornice. It was unconstructural. It was traditional, he admitted, and the beautiful way he had maintained the tradition, with the effect of giving spring, strength, and virility to the design, was marvellous; but he had achieved it by a sculptor's process of thought, and not by the constructor's process of thought. But there was even a step further that he (the speaker) thought we could go. Some of the most successful architectural buildings in London had not been erected by architects—he wished we could say they had been erected by sculptors. He thought it would be generally admitted that the Science School at Kensington was one of the most successful buildings of our period; there was great constructive power in it, great breadth of design, great originality, and very great beauty of detail. Now none of them could say out of what office that design came, or tack it on to any particular school of English tradition. It was evolved quite apart from the Gothic revival and quite apart from the traditional Classic school of the time; it came out of the furnace of Stevens's studio, and it stood as a wonderful record of a beautiful building in the middle of a number of very architectural and very unarchitectural buildings. In these days, when we have searched antiquity and have worn it out, when we have tried to attain to the secrets of Greek art even by the mysterious road of mathematics, and when we have exhausted all that archæology and ecclesiology have provided for us out of the Middle Ages, and have come down to those almost accursed impostures which strip us of ideal architecture and leave only bare brickwork and simple construction, and letting architecture confine itself to the door-knockers, he thought when a door was opened to us so suggestively as Mr. Gilbert had done that night to the consideration of the higher aims that actuated the great sculptors of the Renaissance we had some little hope left to us that if architects could rise to the occasion and bend their studies to the real beauties achieved by these sculptor-architects, we should have a path before us that we should do well to walk in.

Mr. Statham said he wished to explain why he mentioned Brunelleschi when Mr. Pite appealed to them to name any architect of the period as a rival to Michelangelo. He did so because he considered that the very beginning and basis of being an architect was that a man should know how to build. Now Michelangelo failed in the construction of the dome of St. Peter's, which cracked at the haunches and had to have a chain put round it subsequently to keep it from falling altogether; whereas Brunelleschi knew where such a tie would be necessary in the section of his dome, and put it in from the first; he was therefore a better architect. It had been said that Michelangelo would have gained nothing by having an architect associated with him. He (the speaker) did not agree with that in the least. An architect who knew his business could have taught Michelangelo that there was such a thing as scale in architecture, and that to make a building look colossal it was not the right way to make the details colossal; and secondly, an architect could have taught him how to build a dome so that it would not crack. That, he submitted, counted two points to the architect.

Colonel Prendergast said he was in hopes that he would have been told to what period of the Renaissance Mr. Gilbert's remarks were directed, and he had had an idea that he would have heard explained a matter of great interest, viz., the sculpture-architecture of the Quattrocento period. No one who travelled in Italy and who saw those magnificent and perfectly gem-like works could do otherwise than feel that there was a refinement and knowledge about those men, and there was a culture about them to which at present we had not the key.

Mr. H. L. Florence said that what passed through his mind during Mr. Gilbert's very suggestive address was that there was a certain analogy between architecture and sculpture and poetry and prose in the formation of language—that the one was the other gained from the association of ideas; that as prose was ennobled by the words and frequently the rhythm of poetry, so architecture in the periods to which Mr. Gilbert referred gained certainly by the refining and elevating influence of the sculpture. But one of the two must always be the leader; if it was to be poetry, the poetry must be left to itself, and if it was prose it must be free from the too great licence of poetry. He thought that the same had happened in the history of architecture and sculpture. In the early days the lines of the sculpture and its general ideas and disposition were purely architectural, but in later times the influence of the sculptor upon architecture was more prominent, and, to a great extent, it was a deterioration. He would take Bernini as an example. Bernini was a great artist both in his architecture and in his sculpture, and he was successful in combining them and in imparting new ideas and heretical ideas into both, but he was the commencement of a period that led to great degeneration. His almost immediate successor, Borromini, carried all these to too great an extent; he was not content with the simple lines of leading architecture, but imported into them sculptural and fantastic types, which led to combinations, pediments, curves, and twisting of curves, which had cast a reflection upon that period of architecture ever since. To show the influence of the painter's art upon the architect, they might refer to Sir John Vanburgh. He was an architect of very great merit, but he proceeded upon lines of design more in the way of a painter's combination of masses of light and shade. Blenheim, both in its plan and its combination, showed that very plainly, although it might be taken as lumpy and heavy as an edifice. When it came to be studied there was a great deal of thought both in the plan and the groupings of the various blocks of buildings. At the present day we did not often have such opportunities of bringing into contrast the light and shade; our buildings in modern cities were more frequently in regular masses—we had not the opportunity of projecting vast recesses and carved figures, except in those unhappy corners of streets which occurred so frequently, and a return to a simpler style of architecture, such as was practised by the great architects who had been referred to of the more early period of the Renaissance, would show them all by the study of their works that they had much yet to learn from the architects and sculptors of those days.

Mr. Owen Fleming asked if Mr. Gilbert would look upon the spire of Bow Church as a fine piece of sculpture architecture? It was a beautifully modelled spire, but it had no figures and nothing that one ordinarily associated with sculpture. If that was his view, then Mr. Pite's remarks would almost mark an epoch in the development of the way we looked at buildings from what one might almost call the plastic point of view. Another reflection was whether we were training the younger members quite in the right direction to look at their buildings from this point of view.

Mr. G. A. T. Middleton said that all the great architectural periods seemed to have been periods when architecture and sculpture had been very closely allied—the great Grecian period, the great Early Gothic period, and the great Italian and Renaissance period. But while in the Italian Renaissance period the sculptors were to a great extent architects, that did not seem to have been the case in the other two great periods. The Parthenon was the work of one architect, embellished by another sculptor—there were two men employed, two minds at work. Was it necessary, therefore, that the building should be designed and embellished by the same hand? So, too, in the Gothic days, were the same men the architects and the sculptors? We did not really know, but it hardly seemed so. In the Renaissance period the sculptors in many instances were architects, but there were also architects who were nothing but architects; others were painters and architects, but not sculptors. Others, like San Gallo, were architects only. Great buildings could be produced by architects only; greater buildings perhaps by architects who worked in combination with sculptors; great buildings also by sculptors who work as architects; but they, as architects, would submit that at least architects were capable of producing the greatest work. One of the greatest modern works in London, the Accountants' Institute, was the work of an architect in combination with a sculptor—two minds at work again.

The Chairman, in putting the vote of thanks to the meeting, said that Mr. Gilbert had opened up what one might call the higher ranges of thought in this matter, and it was for us to apply them in our practice. It was difficult, perhaps, to define what a sculptor-architect was any more than what an architect-sculptor was. In mediæval times one could not say where the architect left off and where the sculptor came in. That perhaps was a matter of regret; it would be better if architect and sculptor combined in all cases where their joint artistic efforts could be brought to bear upon any monumental work. It was very seldom indeed that we found a completeness in the work of the architect and sculptor in any building—perhaps not half-a-dozen model buildings in the whole of London were to be found. He might mention the London University, in Burlington-gardens, which, he believed, was erected from beginning to end exactly as it was intended to be, but that was owing to the pertinacity of Sir James Pennethorne, who insisted that the building should be complete. Mr. Brydon made some very interesting remarks with regard to the great men to whom he alluded. Such names as Michelangelo, Sansovino, and others come up to one almost "like recollected music"—they were the standposts to which we cling, and to which all who come after us would cling as their guides in artistic life. What Mr. Brydon said about Sansovino most of them would concur in: that any expert in architecture could tell which was the sculptor's work apart from that of the architect's. Architecture was necessarily a constructive art, and in examining a building we always looked for the constructive art, and he thought that was a matter that sculptors did not always bear in mind—they did not see, from their art point of view, that architecture was essentially an art of construction.

The vote of thanks was then put and carried unanimously.

Mr. Gilbert in reply said, in regard to the Chairman's remarks about the London University, would it not have been better if a second thought had been entertained before those—he was going to call them finials, he would call them statues, (because they were intended for statues), were allowed to stand as continuing columns and do nothing except look ugly? The essence of the training of the sculptor was really more with a view to imbuing him with a sense and a real appreciation of the necessity of the knowledge of structure, but it was in a different form from that of the architect. The construction, the structure of a building, after all was contained in very little, but the structure of the human figure was a complex thing. He should like to contrast the structure of the human figure with that part of the structure in architecture which was known as "thrust" and "compensation of balance"; it really was that. Therefore the sculptor's task was to master structure and construction in that which he was supposed to confine himself to. The making merely of the human figure was no slight task, it was much more complicated in

the methods by which he arrived at his training than were those methods which an architect had to go through to learn his construction. He had, so to speak, a log book, but the sculptor had no good log book; he had nothing set down for him, and he took it that with the painter it was the same. If they built a wall of a certain thickness and a certain height, which had to carry a certain weight, they could work it out, or rather they could have a book in which it was worked out for them. Sculptors could not do that. If they wanted to make a figure stand on its legs they had one principle—plumb. They could make any amount of undulating lines they liked, where the architect had to depend upon his plan for his undulating lines. Sculptors could change their lines; they could begin at the head and go down; the architect must begin below and go up. That was the difference of construction. As to Mr. Pite's remark that the modern aim of sculptors was to represent the old-fashioned form, that was not so, and the very object of the words he used in his lecture was to advocate the breaking loose from that idea — that the sculptor should not be considered by the architects or by anybody as merely a maker of what the Italians of whom they had heard that night would have called "pupazzi." As for Michelangelo, he (the speaker) purposely left aside the mention of any name. Michelangelo might have made faults, but his great so-called imitator also made them. They were both sculptors — for he claimed for Wren the distinction (he called it a distinction) of being one of the very greatest English prototypes of what he would like to call the sculptor-architect. He was a modeller of things, and he could not say that Wren was second to the great god he had been taught to worship. The matter of scale was better understood by Wren than it was by Michelangelo. Michelangelo in his belfry windows made apertures that St. Paul's might have been expected to be put through. Let them go to St. Paul's and look at that non-constructive, if they liked to call it so, that do-nothing colonnade—but it is beautiful. It might be carrying nothing—Bow Church had things that carried nothing—but it was plastic. There were lots of examples, but there was not a single example he knew of of Wren's that was not a pure and simple specimen of what he called the sculptor-architect's work. He was a modeller of things, not a builder of things, not a bricklayer, not a masser, but a great moulder, a great plastic artist, an enormous giant that he had not seen the like of since in England. Here came in the plea that he ventured to set forth—that architects should study sculpture and sculptors should study architecture; then they might get that appreciation of that force which that great man had given us. Stevens's Wellington monument had been alluded to. No one admired him more than he (the speaker) did—not only because he was a contemporary, or because he was a singlehearted worshipper at the shrine of all that was beautiful, but because he was a man who tried to emulate everything that was fine, a man who came at a bad time (like another great man who was lost just before him, and like many men who began their life at that time) on the top of a rotten-crested wave. But they did not see Stevens at his best in the Wellington monument. His greatest effort was in those works which distinguished the sculptor-architects; it was that power of design, of realising an idea in the design—not merely a mass of tracery, "This is an ornament" written underneath, but every line meaning something. He was like the great Bernini, whom they had heard so much abused, who built and made that magnificent baldachino in St. Peter's. Stevens took from Bernini traditions, but he did not copy Bernini because he was essentially Stevens. He had not the slightest intention to convey that building and sculpture should be necessarily the work of one hand—that we knew was an impossibility; but what he wanted to impress was that it would not be at all a bad or an unbeneficial thing for those who were learning to walk in their respective Arts, whether they be builders or whether they be architects, if they would each study the art of the other, that they might know, when they had to build a building, that it was far better to employ a man who was trained as an artist to help the architect to carry out his work than to call in, forsooth, the purveyor who would supply at so much a foot, and through the hands of imported labour that which he could get cheaper, but the interests of the maker of which he could not enlist further than the Saturday night's consideration. Would it not be better that the architect should learn that it was possible to get the sympathy of his brother artist and treat him as such, and let the sculptor treat the architect as a brother artist and give encouragement to the would-be sculptor-architect to make beautiful things? There were men who might be young in their Art but who were quite as capable as the hired labourer of the purveyor and pedlar of trifles. There were hundreds of youths who could make Gothic statues if they wanted Gothic statues, and could make recumbent bishops if they wanted recumbent bishops, and what he had in his mind was that the architect of to-day did not seek to work with the sculptor, and consequently the sculptor said "*Buona notte*"—as he (the speaker) did then to his hearers.

The Chairman announced that the next meeting would be held on the 15th inst., when Mr. H. E. Milner would read a paper on "The Garden in Relation to the House."

The meeting then terminated.

NATIONAL ASSOCIATION OF MASTER BUILDERS OF GREAT BRITAIN.

THE National Association of Master Builders of Great Britain held its thirty-eighth half-yearly meeting at the Old Bull Hotel, Blackburn, on the 26th ult., when representatives were present from London, Liverpool, Birmingham, Bristol, Manchester, Hull, Blackburn, Bolton, Bradford, Huddersfield, Plymouth, Wolverhampton, Southport, Scarborough, Burslem, Leicester, Wigan, &c. Mr. Thos. F. Rider, London, President, was in the chair.

The report for the past half-year was approved and adopted. Mr. C. W. Green, of Liverpool, the Hon. Treasurer, submitted his audited accounts for the half-year, showing the financial position of the Association to be most satisfactory.

The President, in his opening speech, said that though the state of trade generally was good, they had to deplore the ruinous competition which seemed to prevail in all trades throughout the country. It seemed to him that competition up to a point was a very valuable thing, but he objected to "cutting each others' throats." This competition seemed to increase as years went on. He supposed it was one of those matters which would go on, but it was rather a pity that men should follow out a practice which was inimical to them in so many ways. Another thing that they had to consider was the old complaint of the British workman, whose desire seemed to be to give the smallest possible amount of work for the largest amount of wage. The only remedy seemed to be a revival of the old system of payment for piecework. As regarded the question of the Employers' Liability Bill, no doubt this would be of a considerably more stringent character than ever. It seemed probable they would be held liable for accidents of every description, whether caused by negligence or otherwise, and he thought that this liability might be met by joint insurance. If some means could be devised to make a fund to be subscribed to by master and workman, it might solve the problem of Employers' Liability. No further steps had been taken respecting the Plumbers' Registration Bill. The question of arbitration had taken up a great deal of time with many of the Associations. In London they had a clause that in the event of any man being obnoxious, and the employer refusing to discharge him at the wish of the workmen, the matter should be referred to arbitration, and if the masters and workmen could not agree in the choice of an arbitrator the Board of Trade should appoint one. If this way became universal there was no doubt that it would lead to a much more happy state of things, as there must necessarily be more satisfaction in arbitration than in fighting a matter out. The President then spoke at length as to the best form of contract, and stated that the old form, agreed upon more than twenty-five years ago, still continued in use, in face of a new and more elaborate one prepared by the architects, and this principally because, he said, of the unfairness of the Arbitration Clause. Finally, he wished to increase the number of the National Association of Master Builders, and to make it in every sense a "National" Association.

Mr. Bowden (Burslem) and several other members supported the President's remarks with regard to increasing the scope of the Association.

The question of the form of apprenticeship indentures was discussed, and it was decided to leave the matter over until the next meeting, so that members should have an opportunity of further considering the proposed form.

The Secretary read a resolution of the London Central Association as to the scarcity of plasterers.

The President said they had had considerable trouble in London, and one thing had been proved to them, viz., that the supply of plasterers was insufficient. Various ways had been suggested of increasing their numbers. Among them were:—1. To increase the number of apprentices. 2. To find a substitute for plastering. 3. To maintain schools of plastering. Several of the members expressed their opinion on the subject, and it was decided to refer the matter to the Council.

Mr. T. F. Rider (London), Mr. J. Stevenson Jones (Liverpool), and Mr. Ald. W. Holdsworth (Bradford) were re-elected to the positions of President, Senior Vice- and Junior Vice-President respectively for the ensuing year. Mr. A. Krauss (Bristol) was elected Hon. Auditor for the ensuing year. Mr. G. Hardington (Leicester) and Mr. R. G. Jenkin (Plymouth) were elected as members of the Council for their respective towns. Mr. C. A. Hayes (Bristol) invited the members of the Association to hold their next half-yearly meeting in his city, which it was unanimously resolved upon to do.

A hearty vote of thanks was accorded the President for his services in the chair.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, Sir Arthur Arnold, Chairman, presiding.

New Entrance to Richmond Park.—Mr. Boulnois, M.P., submitted a petition, which, he said, was numerously signed by the Metropolitan ratepayers generally, urging the Council to consider the advantages that would arise from opening up some of the streets leading to Roehampton-gate, Richmond Park, by way of forming a new entrance to the park.

The petition was referred to the Improvements Committee.

Loans.—On the recommendation of the Finance Committee it was agreed to lend the Chelsea Vestry 7,900*l.* for laying asphalte in King's-road; the Battersea Vestry 2,940*l.* for electric light purposes at the vestry offices and town halls; and the Holborn District Board 3,000*l.* towards defraying the cost of their contribution towards the Brooke's Market improvement scheme.

Manager of Works.—The General Purposes Committee reported as follows:—

"The Council on December 1 last resolved that an advertisement should be issued inviting applications for the position of manager of the Works Department, with the understanding that the appointment is not necessarily a permanent one, and that the salary would be subject to revision in the event of the Council deciding that a limit should be placed on the extent and character of the works to be executed by the Works Department. We have now to report that, in accordance with the above resolution, an advertisement was issued, and that in response thereto 237 applications were received. The applications were in the first place considered by a sub-committee, who, after seeing twenty-two of the candidates, submitted to us the names of five of the candidates. We have ourselves seen these five candidates, and, having weighed their respective merits and qualifications, we now, in accordance with the standing order, submit to the Council the names of the following three, viz.:—1, Mr. W. Adams; 2, Mr. H. H. Holt; 3, Mr. J. J. Warbrick. The standing order also authorises the Committee to indicate, if it should think fit, the candidate whom it recommends the Council to appoint. We recommend—

'That, subject to his passing satisfactorily a medical examination, Mr. William Adams be appointed Manager of the Works Department at a salary of 1,500*l.* a year, upon the understanding that the appointment is not necessarily a permanent one, and that the salary is subject to revision in the event of the Council deciding that a limit should be placed on the extent and character of the works to be executed by the Works Department; and that the appointment be made upon the following conditions:—That the appointment be terminable by three months' notice on either side; that the manager be required to give his whole time to the duties of his office, and be not allowed to take any private business; that any fees received by him, either as a witness or in any other capacity, and any discount or allowance on materials purchased, be paid to the Council; and, further, that on retirement he shall not be entitled and shall not make any claim to any retiring allowance under the Superannuations Act, 1866, and that he shall be subject to the Council's regulations in respect of a superannuation and provident fund.'"

Colonel Ford moved, and Mr. A. Smith seconded, to refer the matter back for further consideration, but after some discussion the recommendation was agreed to.

Mr. Adams thanked the Council for appointing him to the post, and said that he would spare no effort to make the Works Department a success.

From his experience he had no doubt whatever that a great deal of the Council's work could be done cheaper without a contractor.

Boadicea Statue.—The same committee brought up the following report, the recommendation being agreed to:—

"On December 22 last we brought up a report to the Council on the subject of an offer made by Mr. W. J. Bull, L.C.C., with reference to the Boadicea statue, and the Council adopting our recommendation passed the following resolution—'That the Parliamentary Committee be instructed to take the necessary steps for a clause to be inserted in one of the Council's Bills, empowering the Council to purchase, or contribute towards the cost of purchasing, or otherwise incur expenditure in connexion with the provision and erection of, works of art in London.' We have now to report that a further letter has been received from Mr. Bull to the effect that the Boadicea Fund Committee are anxious to have the statute erected this year, and that Mr. J. I. Thornycroft, the son of the sculptor, who has offered to present the group to the Council, will give the order at once for the casting of the model, and pay the money as and when required, he relying upon the Council to repay him it and when it obtains Parliamentary powers, or upon further subscriptions being secured, or finally standing to any eventual loss if the Council does not contribute. This is a generous offer on the part of Mr. Thornycroft, but, as in the ordinary course, the necessary power for the Council to contribute cannot be obtained for eighteen months, we think it would be inexpedient for the Council to accept at the present time any liability whatever in the matter. We accordingly recommend—

'That Mr. Bull be asked to convey to Mr. Thornycroft the thanks of the Council for his liberal offer in connexion with the Boadicea statuary group, but at the same time to inform him that the Council is not in a position to contribute towards the cost of casting the model of the group, or to bind itself to do so hereafter even should Parliamentary power be given for the purpose; and that while the Council will proceed to promote the Bill, it must be understood that any steps which Mr. Thornycroft may take in the matter are taken entirely on his own responsibility.'"

Boundary-street Improvement Scheme—Paving-work.—The Housing of the Working Classes Committee recommended, and it was agreed, that the work of constructing the temporary roadways referred to in the report in connexion with the Boundary-street scheme be executed by the Council without the intervention of a contractor, and that the plan, specification, and estimate be referred to the Works Committee for that purpose; but that in the event of that Committee not being satisfied of the sufficiency of the estimate, the Housing of the Working Classes Committee be authorised to invite tenders for the work.

Land at the Cattle Market, Islington.—The Parks and Open Spaces Committee recommended that the Council do approve the estimate to be submitted by the Finance Committee, and do contribute one-half of the cost of the acquisition by the Vestry of Islington of two pieces of land, having a total area of about 5½ acres, lying to the south of the Cattle-market, Islington, such contribution not to exceed 8,000*l.*, on condition that the Vestry do acquire the land under the powers of the Metropolitan Market Act, 1896, and do undertake to pay all the costs of the acquisition and to lay out and maintain the land as a place of public recreation; and that it be referred to the solicitor to prepare the necessary undertaking.

Dr. White moved as an amendment to insert the words "as an open space" after "maintain."

The amendment was defeated and the Committee's recommendation agreed to.

The Water Question.—The Parliamentary Committee in reference to the Water (Purchase) Bills now before Parliament, reported that they had been engaged in discussing terms of agreement with the authorities outside the County of London, but within the area of the water companies, and had made very considerable progress. The questions remaining to be settled were (with one exception) rather questions of detail than of principle. They now presented two agreements to the Council for acceptance. Both of these had been very thoroughly considered. They were advised, and were of opinion, that these agreements afforded a fair settlement as between the interests of the respective authorities, and were advantageous to the County of London. They therefore recommended:—"That the agreement with the County Council of Surrey be approved and sealed, and that, subject to the approval of Parliament, such clauses as may be necessary to give effect thereto be inserted in the Bills relating to the Lambeth and Southwark and Vauxhall Water Companies, and that the clause arranged with the Corporation of Croydon be approved, and, subject to the approval of Parliament, be inserted in the Bill relating to the Lambeth Company."

Dr. White moved to refer the matter back until the Committee could bring forward agreements with all the outside authorities.

Mr. H. P. Harris seconded the amendment.

The Earl of Onslow believed that the effect of the agreements was not fully understood, and doubted if it were desirable to saddle the purchase of the water undertakings with agreements to sell off a very large portion of the rights acquired. How could they decide how much water Surrey should take from the Thames before they knew how much Hertfordshire would require from the Lea? They were dealing with powers they did not possess, which was premature.

Mr. M'Kinnon Wood, Chairman of the Committee, pointed out that the Council's scheme was to give to the outside authorities rights similar to those claimed for the County of London.

Sir John Lubbock, M.P., said the matter required further consideration, as there were great difficulties in drawing the lines between the various districts.

After some further discussion the amendment was defeated on a show of hands by 36 votes to 35, but on a division it was carried by 53 votes to 51.

Millbank Prison Site.—The Housing of the Working Classes Committee brought up the following report, the recommendations being agreed to:—

"The Council, on December 22 last, approved the plan for the laying out of the roads on the Millbank prison site, and instructed us to take the necessary steps for the execution of the work in accordance with the plan. It now becomes necessary for the Council to decide as to the preparations of the plans of the dwellings to be erected on the site. We estimate that the portion of the site acquired by the Council will accommodate about 4,500 persons. It will be remembered that 1,500 of the persons displaced under the Clare-market scheme have to be accommodated on the Milbank site, and as the scheme will no doubt be confirmed during the present session of Parliament, we are very desirous of being able to offer dwellings to these persons before they are compelled to leave their homes; moreover, the War Office authorities are preparing plans for the buildings they propose to erect on the portion of the site retained by the Government, and are pressing us for the levels of the centre roadway on the site. We have given the matter our careful consideration, and we are of opinion that the most expeditious method of procedure will be for the Council's architect to prepare plans for the erection of blocks to accommodate about 1,200 persons. With regard to the remaining blocks, we think that in view of the important position of the site, the Council would do well to invite designs from outside architects. By adopting this course the Council will obtain the benefit of the experience of architects who have given special attention to this class of building, and will, moreover, have the advantage of the criticisms of its own architect upon such plans. Under the proposed arrangements the Council's architect will at once proceed with the preparation of plans of the dwellings to accommodate a portion of the persons on the site, and we expect that these dwellings will be in course of erection by the time that the competitive designs have been considered. We propose that an advertisement should be issued inviting architects to submit their names as being willing to compete, and that a limited number of those replying to the advertisement should be selected to send in designs. We recommend—

'(*a*) That the Committee be authorised to instruct the architect to prepare plans of dwellings for the accommodation of about 1,200 persons on the portion of the Millbank prison site acquired by the Council.

(*b*) That the Committee be authorised to issue an advertisement inviting architects to send in their names as being willing to submit designs for the erection of buildings on the remaining portion of the area; to select a limited number from among such architects, and to invite competitive designs from those so selected.'"

Churchway, Euston-Road.—The proposal of the Improvements Committee to contribute 3,800*l.* for the improvement of Churchway, Euston-road, was objected to by Mr. McDougall, who moved its rejection. After a discussion there voted, for the rejection 35, against 40. The recommendation was then agreed to.

The Council having transacted other business, adjourned soon after seven o'clock.

COMPETITIONS.

CHURCH TOWER, LISKEARD.—The Liskeard Church Tower Committee have received a report from Mr. E. Sedding, of Plymouth, as to the two best designs for the proposed new tower of the parish church. Twenty-five designs were examined by him, and the plans of Mr. J. Sansom, of Liskeard, and Mr. H. P. Burke Downing, Great College-street, Westminster, S.W., have been respectively awarded the first and second premiums of fifty guineas and twenty-five guineas.

SURVEYORS' INSTITUTION:

STUDENTS' PRELIMINARY EXAMINATION.

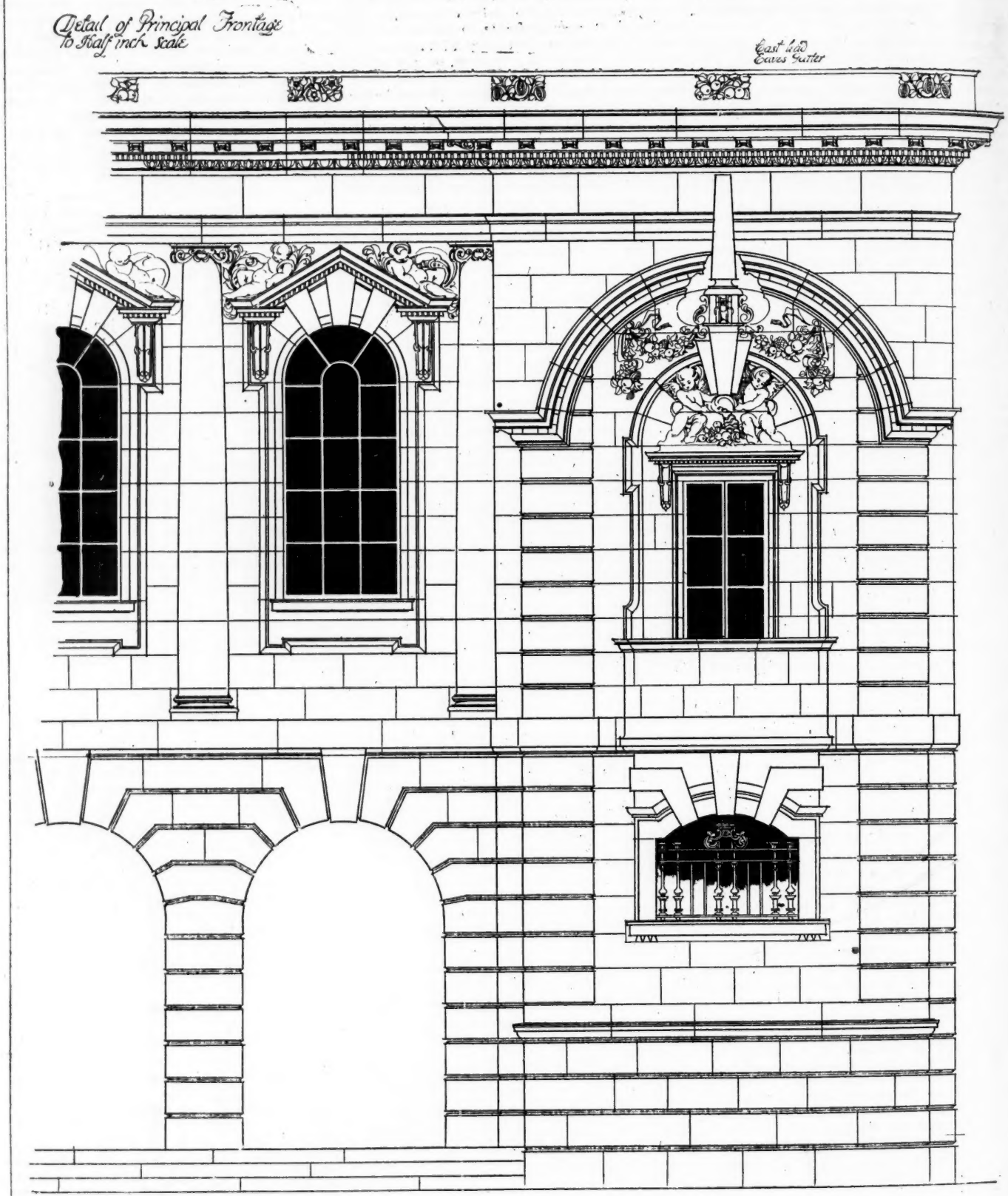
OF the candidates who presented themselves at the preliminary examination of this Institution, held concurrently in London, Manchester, and Dublin, on the 20th and 21st ult., the following satisfied the examiners:—C. H. Alderson, Ealing; J. W. Armstrong, Blacon, Stratford-on-Avon; W. B. Aubrey, Chelmsford; R. Bartram, Highbury; F. Bate, South Hackney; H. A. Bettger, Kilburn; W. R. Bingham, Hatcham; A. G. Bradshaw, Lancaster; C. J. B. Bridgewater, London; H. C. Brierley, Sledmere; H. W. Brindley, Edgbaston; S. L. Broad, Bournemouth; T. E. Butcher, Chesham; B. C H. Cannell, Norwich; A. P. Chattell, Chislehurst; G. R. Church, South Hampstead; N. Clark, jun., Pitt Hill, Co. Durham; G. H. Cole, Tonbridge; F. N. Cooke, Leicester; G. H. Cope, Broxton, Chester; C. H. Cramphorn, Chatham; G. H. Croft, Brighton; E. H. Crump, Cheltenham; H. W. Currey, London; H. Dann, jun., Dartford; J. W. S. H. Davies, London; P. F. Dyer, Lewes; H. E. Edwards, Chelsea; R. L. Ellis, Lewisham; H. Evered, Horley; J. L. H. Flew, Manningham, Bradford; A. C. Frost, Morden; H. A. A. Gate, London; S. S. Gettings, Erdington, near Birmingham; H. Gould, Forest Hill; G. F. C. Hamilton, Dunboyne, Co. Meath; W. W. R. Harlow, Hanley; H. K. H. Henderson, Worcester; H. A. S. N. Hoare, Bayswater; A. E. Hooper, Andover; W. C. Houghton, Walthamstow; C. F. Hutchinson, Preston near Hull; E. J. S. Jenner, Henley-on-Thames; H. D. Jonas, London; A. V. Kislingbury, Finchley; W. F. Langridge, Tunbridge Wells; L. Lanham, Basingstoke; F. A. Lees, Bedford; H. Lemmoin-Cannon, London; J. Lewis, St. Albans; F. R. Lumley, Downton; W. S. Mackintosh, Studley; S. Mager, Tufnell Park; F. R. Mark, Stepney; C. V. W. Martin, Wakefield; T. J. Meaby,* Wimborne; S. G. Meacher, Malvern Link; H. L. Michell, London; D. A. Morle, London; S. H. Newsome, Alvechurch; S. S. Orchard, Exeter; A. B. Paget, London; G. K. Pierson, Altrincham; G. Pinson, Solihull; F. P. Pratt, Ongar; H. R. Quarterly, Maidstone; H. S. Rendell, Newton Abbot; W. F. Robbins, Wingham; A. D. Rutley, Caterham Valley; P. Schofield, Atherton; E. Sharpe, Leicester; G. S. Simpson, Lancaster; E. J. Stead, Moss Side, near Manchester; C. F. Stedman, Cranleigh; A. W. A. C. Tannahill, North Finchley; R. Tanner, London; W. W. Tremlett, Downton; V. Turner, Wolverhampton; T. B. Wacher, Canterbury; P. Watson, Petworth; E. M. Webb, Norwich; C. S. Weekes, Tunbridge Wells; H. Welsh, Cockermouth; F. C. Wheeler, Cobham; C. C. O. Whiteley, Streatham; C. E. Widdicombe, Cambridge; S. P. Wigley, Winslow; H. Williams, Norwich; J. Winship, Cambridge; J. G. Withycombe, St. Albans; T. H. Wright, Streatham Park.

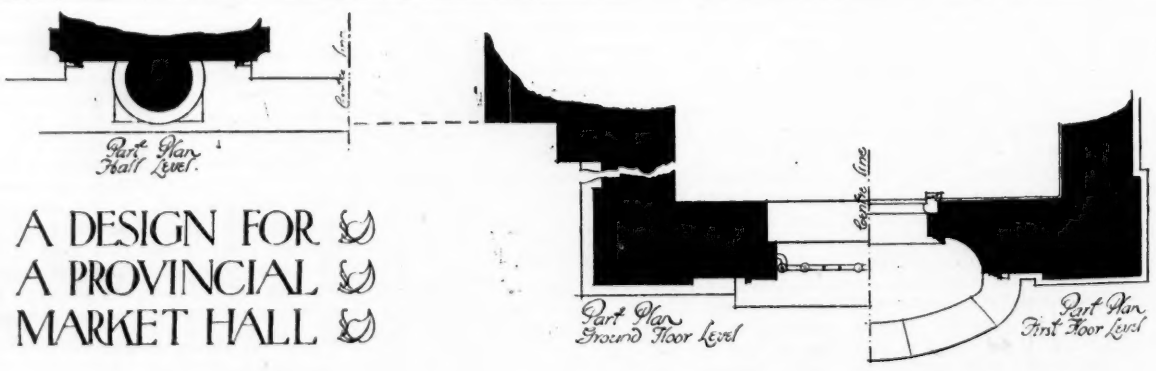
ARCHÆOLOGICAL SOCIETIES.

SOCIETY OF ANTIQUARIES.—A meeting of this Society was held on the 28th ult., Viscount Dillon, V.P., in the chair. The Rev. W. C. Stratfeild exhibited and presented a number of illuminated pedigrees and other documents. Mr. Rome exhibited a small white marble bust of Jupiter Serapis, found in Egypt. Mr. Haverfield communicated a note on a Roman lamp of terra-cotta found at Bradfield, Berks, which was also exhibited. Mr. Hilton Price exhibited some beautifully-worked flints, with crescent-shaped heads, from Luxor; also a remarkable terra-cotta object containing an Archimedean screw—perhaps a model of similar contrivances used for irrigation purposes. Mr. J. R. Mortimer communicated a paper on a number of cruciform embankments in East Yorkshire, which he supposed to be the Christian successors of the circular mounds used for the assembly of the folk-moot. It was, however, suggested in the discussion that followed that such embankments were more probably thrown up as shelters for sheep and cattle, the summits being planted with bushes or small trees to keep off the wind.

PROFESSIONAL AND BUSINESS ANNOUNCEMENTS.—Mr. Thomas Elsley, ironmonger, informs us that his business has been converted into a Limited Company. The name of the firm will be Thomas Elsley, Limited, and the office address, 28, Great Titchfield-street.

* Passed at head of List.





A DESIGN FOR A PROVINCIAL MARKET HALL

Soane Medallion Prize Design. Detail Elevation. By Mr. I. A R. Inglis.

Illustrations.

DESIGN FOR A MARKET HALL.

THIS is the design, by Mr. J. A. R. Inglis, to which the Soane Medallion has been awarded this year; an award in which we entirely concur.

The building takes the old form, familiar to us in so many country towns of England, of an open vaulted ground story supporting a more lofty roofed hall above. The details of columns, pedimented windows, and rusticated voussoirs, are such as present no novelty in themselves, but the author has treated them with a rather unusual and sculpturesque boldness of relief which is very effective, and is well brought out in the perspective sketch. The weak point of the design lies in the projecting additions at each end, which do not seem quite sufficiently incorporated with the main design. But as a whole this is a very agreeable design which shows a good deal of promise for the future of its designer. The following is the author's description of the design:—

"The conditions drawn up by the Council of the Royal Institute of British Architects for this Travelling Studentship required a design for a provincial market-hall covering an area not exceeding 4,000 superficial feet, detached on all sides, and forming the centre of a market-place.

The subject does not seem to allow of much licence in the planning, and in this scheme the general features of our old examples have been adhered to, with some necessary modern additions in the accommodation of the adjuncts to the hall, private stairs to the retiring-rooms, &c.

The endeavour in the architectural treatment has been to follow in the lines of some of the best-known examples of market-halls, at the same time not rigidly keeping to tradition."

EYAM HALL, DERBYSHIRE.

THE village of Eyam, in the North of Derbyshire, has obtained historic renown through the heroic conduct of its inhabitants during the terrible year of 1666, when the plague devastated the little community. Eyam Hall, however, according to Wood, the historian of his village, was built after the plague year, some time near the close of the seventeenth century, and is described by him as a "large, handsome, and rather antique looking building." This description was written in 1842, when, apparently, the appreciation of what we now call "the picturesque" was unknown to our historian. In other parts of his book, indeed, he evinces a decided partiality to the "elegant and respectable," but he evidently does not wish to disparage this building as he has heard that it has been commended by "one skilled in architecture."

The Hall has been long the residence of the Wrights, an ancient Derbyshire family. It is situated in the heart of the village, facing the main street, but partly hidden by a high wall. The stone has weathered a beautiful colour, and with its well kept lawns, the building forms not the least picturesque bit in an exceedingly interesting village. F. H. CHEETHAM.

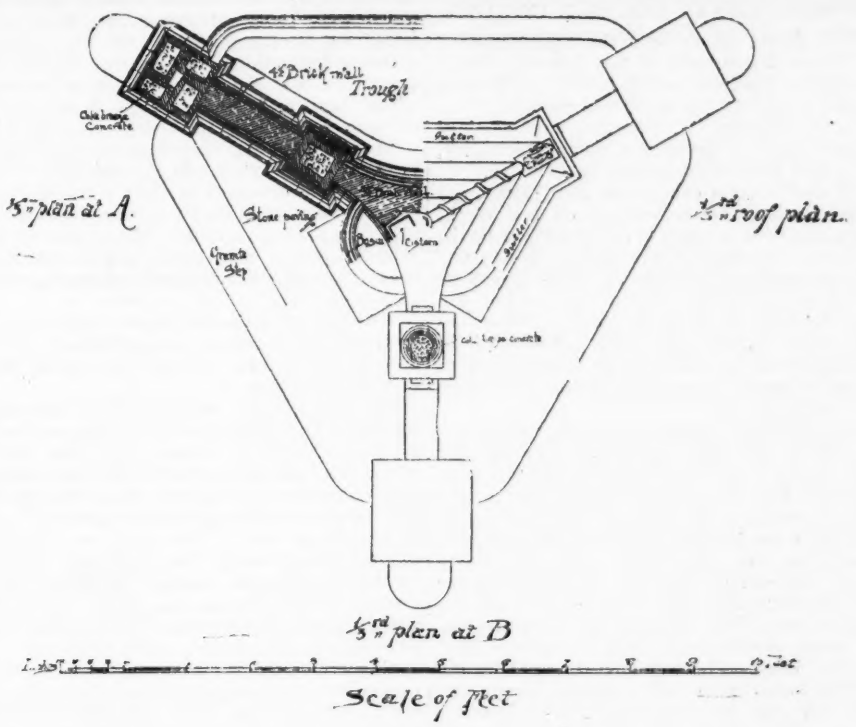
DESIGN FOR FOUNTAIN.

THE conditions of the competition stated that the fountain was to occupy a triangular open space and was to serve people, cattle, and dogs. These particulars very naturally suggested a triangular plan.

The materials proposed to be used in its construction were: Doulton's Carrara ware for the piers, pedestals, shafts, entablatures, roof, &c., all in fawn colour, except the shafts of the small columns, which were in blue; the filling of the lower part was to be in best selected dark-blue Staffordshire bricks. Owing to the curved shape of the trough it was thought advisable to use Victoria stone for this purpose. The steps and posts were to be in grey granite.

A small cistern regulates the supply to the drinking basins; this is placed in the centre of the brickwork, and is accessible from a small iron door fixed over one of the basins. The wastes from the drinking basins supplies the dog trough, which is placed underneath the cattle trough. Another small ball-valve is suggested at the side of trough to regulate this supply. The amount estimated for the erection of the fountain was 120*l*. HUGH MACINTOSH.

*** This is the premiated design in the competition for a fountain which was advertised in our columns some little time since, and as to the result of which we received several inquiries from competitors.—ED.



Design for Fountain. Plan.

HOUSE ON HINDHEAD.

THIS house is being built for Mr. Rayner Storr, on Highcombe Edge, Hindhead, adjoining the Devil's Punch Bowl; and commands on three sides some of the most magnificent vistas in Surrey.

The materials are Petersfield brindled bricks, with red brick dressing, Headley stone piers, and keys, rough cast plaster. The roofs are covered with Elterwater slates in diminishing courses, and the dormer cheeks are tile hung; one of the bays being hung with oak shingles.

The contractor is Mr. Ernest Chapman, of Grayshott; the slating by Messrs. Thos. & J. H. Stirling; the sanitary work by Mr. George Chappelow; the architect being Mr. William A. Pite, of London.

PRESBYTERIAN CHURCH, WEST NORWOOD.

THIS building, which is shortly to be erected, will stand on an elevated and prominent site at the corner of Thurlow Park-road and Court-road, West Norwood.

The building comprises a church with minister's, elders', and choir vestries, and a large hall and class-rooms. In the church itself the ordinary aisle arcading is done away with—the roof being constructed on a modified hammer-beam method—in order that every seat may have an uninterrupted view of the pulpit. The materials to be employed are red brick facings externally and internally, with Portland stone dressings. The roof will be of pitch pine, as will also be the seating.

Messrs. Treadwell & Martin, of London, are the architects.

GRAY'S INN CHAPEL.

THE accompanying drawing represents the interior of the chapel belonging to the Honourable Society of Gray's Inn. The old flat plastered ceiling has been replaced by a panelled ceiling in Sequoia wood supported on four-centred principals, four in number, and with intermediate ribs, and a stone cornice with carved bosses beneath the wall plates, and carved stone corbels under the principals. The old east window, which had been partly bricked up, has been restored as far as practicable to its original size, the remains of the old sill having been found in cutting down the wall. Two three-light windows were also discovered in repairing the walls, the brickwork of which had crumbled away, and had to be cased with new brickwork in Portland cement. The three windows on the north side have also been restored and glazed with plain cathedral glazing.

The old shields of arms which were formerly in the east window have been incorporated with the glazing of the windows on the north side. Three of the openings of the five-light east window are glazed with stained glass (from one of the north windows) representing the Ascension, and the remainder with painted Grisaille glass, the work of Messrs. Heaton, Butler, & Bayne.

The screens to the entrance lobby, and beneath the gallery to the vestry, also the front to the gallery, are of oak, partly with linen-fold panels and enriched with suitable carving. The seats are also of oak. A moulded stone string course has been carried round beneath the sills of the windows, and the plastering of the walls is finished in Keen's cement. The altar space and the aisles are paved with black and white marble mosaic.

The site of the former vestry has been added to the chapel, so as to afford space for an organ chamber, and two four-centred arches accordingly have been reinserted in the south wall. The organ is by Messrs. Henry Jones & Sons, and is a much more powerful instrument than the organ formerly existing. The chapel is warmed by hot-water pipes, on the high-pressure system.

A stone tablet in three panels has been inserted in the south wall to commemorate the names of the preachers of the Inn from 1574 down to the present time. These names have been engraved on brass plates, which are inserted in the panels of the tablet.

During the progress of the works the remains of the old holy water stoup were discovered; these have been carefully rebuilt into the north wall near the entrance. The old Jacobean pulpit, which was covered with many thicknesses of paint, has been carefully cleaned, prepared, and refixed with an appropriate newel staircase thereto. The paint which had been placed on the ashlar facing of the porch, has been carefully scraped off, and the stonework restored to its original condition, and a new panelled ceiling of oak formed in lieu of the incongruous plaster ceiling and cornice then existing.

No discovery of any importance was made in the excavations beneath the old floor, although it was at first thought that some objects of archæological interest might be found hidden therein. A brass plate has also been inserted to commemorate the restoration.

The design and supervision of the works were entrusted to Mr. Charles Herbert Shoppee, of London. The contractor for the general works was Mr. S. F. Halliday, of Stamford, Lincolnshire; the paving was carried out by Mr. J. F. Ebner; the heating by Messrs. J. L. Bacon & Co.

LONDON COUNTY COUNCIL INQUIRY.

THE special inquiry into the organisation of the Works Department of the London County Council was continued on Wednesday and Friday, January 20 and 22, Sir A. Arnold presiding.

The Comptroller, Mr. Haward, was examined at great length on the resumption on Wednesday, but no new point of importance was elicited.

The next witness called was Mr. Jacobs, one of the foremen in the employ of the Works Committee, who in reply to questions put by the Chairman with regard to the method of engaging workmen, said he took them on when they were wanted without making any distinction between trade unionists and non-unionists. There had never been on his works any interference by members of the Council, and he was not aware that any relatives of members of the Committee were employed.

In reply to Dr. Longstaff he said he was not now, but he had been formerly, a member of a trades union, that he had been twenty-five years a foreman, and since 1893 in the employ of the County Council. He had been employed principally under the Architect on many different jobs, some large and some small. He had never known any serious delay to take place in the supply of materials. He had usually found the workmen under him industrious, and he had not had more trouble with skilled workmen than unskilled men. He had had more difficulty with labourers than with skilled men. He could not say that the men he had under him in the employ of the County Council were better than those he had under him when in the employ of contractors, but they were quite as good. He thought the quality of the work was better. He had complete control of his men, was not unduly severe, and he thought that his works had been fairly profitable. He had never been told that the work was costing too much. His job was visited occasionally by the Chairman of the Works Committee, but seldom by individual members, and the witness repeated that on this account he had never had any serious difficulties. He had always been on good terms with the late manager, of whom he had no complaint to make, but he thought he might have been a little more experienced in building matters.

In reply to Mr. Alderman Beachcroft, he said he had been engaged as foreman by the late manager. It was part of his duty to engage workmen, and he had full power to dismiss them. There was no particular rule of selection. They were engaged by him solely on his own judgment and knowledge of the men, his acquaintance with workmen being very extensive, and it was not true to say that workmen were engaged on the recommendation of others. He kept a list of the names of workmen, but not of their addresses. Asked with regard to the popularity of the late manager and as to the existence of malpractices, the witness said that the late manager was not generally liked; he no doubt wanted to make the Department as successful as possible, but he (the witness) had not heard of any malpractices.

In reply to Mr. Davies, the witness said he had been employed in a similar capacity under various contractors, and he had no more difficulty now than under his former employers. He had no special instructions from the manager as to the quality of the work; both under the Department and under contractors his instructions were to get his jobs done as speedily as possible. He had never had special instructions from the manager as to the ordering of materials, and it had never occurred to him to order more than was wanted, though he might have been required at times to send to another job a few materials such as header bricks if he had any spare ones. He had no knowledge of any inferior mortar being used on his jobs. His work was performed under the direction of Mr. Blashill's assistants, but not under the Architect direct. He believed his work was considered satisfactory. With regard to the quality of the work done by the Department as compared with that done by contractors, he thought the work done by the Department was of higher quality for many reasons. He thought the workmen had a spirit to do the work better than contractors' men.

Questioned by Mr. Dickinson with regard to the code of regulations governing his work, the witness said he selected his men from a knowledge of their ability, without giving preference to local labour. It was subsequently explained by the next witness, Mr. Ward, the Chairman of the Works Committee, that a clause with regard to giving preference to local labour had been omitted from the revised code of regulations, which were those governing the duties of the foreman at the present time. On the question of strikes in the building trade it was elicited from the witness that the only workmen in the employ of the Department who went out during the late strike in the building trade were the plasterers.

In reply to Mr. Gruning, the architectural assessor, the witness said he generally selected his men from workmen he had known for years. He could almost always tell men that were suitable from their appearance. There was no difficulty in getting men when they wanted them, because it soon got known when men were wanted on any job.

Mr. Gruning: Do you know contractors who employ gangs of men on special terms?—Yes; to do special work. So do we for certain work, such as scaffolding.

Mr. Henry Ward, M.Inst.C.E. (Chairman of the Works Committee), the next witness called, in reply to Sir Arthur Arnold, said that the last witness had correctly described his functions, and that notices were posted on all the works, instructing foremen to make no difference between union and non-union men. Questioned with regard to the purchase of timber, Mr. Ward said the whole of their timber was bought by public auction (except a little hardwood), by an agent, on a commission of 1 per cent. The qualities varied as well as the prices, some being of best quality and some much cheaper. The Works Committee had to pay a much larger sum than any contractor doing the same amount of work in audit charges, and it was at a disadvantage in other respects. The tendency was, perhaps, for their workmen to do rather less work than for a contractor, whose sole idea was profit-making, and the more favourable conditions of the specifications issued to contractors would often enable them to make a saving where the Department could not make any saving. There was not the slightest doubt that the Council had suffered disadvantage from the friction that existed between the Committee and the Architect. This had arisen almost at the first, through the first job, the Fire Station at New Cross, having a specification very full of special items requiring the Committee to obtain certain materials from certain specified firms. Without these items the Committee could have carried out the work at 5 per cent. less cost. He denied that the iron-work was of an inferior character, and he also denied the allegations which had been made with regard to the use of lath and plaster instead of sand for mixing with mortar at Hughes Fields. The witness said a sample was taken at half-past seven at night, at a time when no one was at the job except the watchman, and the sample was probably taken from a heap of rubbish that had been rejected as unfit for use. Members of the Committee had tried the mortar with their knives and found it very good. He hoped the assessors would also try it. With regard to the alleged inferior brickwork at Mount-street, which the foreman had refused to rebuild, he said it had been examined since and had been pronounced one of the best bits of brickwork in London.

Asked to give his opinion with regard to the constitution of the Works Committee, the witness said he thought it was too large, and that the method of electing the Committee was a bad one. It had given them ten members in sympathy with the Works Department, and ten who were not altogether sympathetic. The result was that they pulled in opposite directions, and were like partners in a business who did not agree. If the Committee consisted of only five members selected from the Chairmen and Vice-Chairmen of the Spending Committees, or if they were men who really desired to get the work done instead of making party capital out of the Department, it would be a great improvement.

With regard to the question of tendering by the Committee, Mr. Ward said he doubted whether contractors would agree to tender under such conditions. A still more serious objection was that the Committee, which could only obtain its work from the Council, could not compete in open contract with a certain class of contractors, who, as stated in evidence by previous witnesses, did not know how to tender. He thought the work of the Department exceedingly good, and most experts would give 10 per cent more for it than for work done by a contractor.

Replying to the allegation that the visits of members of the Committee had been disadvantageous, the witness said that in his opinion such visits, on the contrary, had proved a great advantage to the Council, and had helped forward the Council's interest.

The sitting was at this point adjourned to Friday, the 22nd inst.

The examination of the Comptroller was resumed on Friday by Mr. Gruning, who elicited the further statement with regard to audit charges that 850*l.* was paid last year simply in order to satisfy the curiosity—the legitimate curiosity—of the Council as to the cost of the works completed or in progress. The difficulty of getting contractors to tender for work after the introduction of the new labour clauses led to the formation of the Works Department, the tendency in which was to do less work than contractors but to do it better. It had been stated by Messrs. Cubitt, Trollope, Holland and Hannen, &c., that they could not compete with the Department at competition prices and put in the quality of work required. The Department, therefore, did work equal to the best firms and at competing prices. Notwithstanding the disadvantages he had mentioned, the Department was able to show a profit of 8 or 9 per cent. The jobs which the Department had refused were refused on the advice of the late manager, when he was not satisfied with the estimates. The witness was in favour of giving out some of the jobs to contractors in the same way as the Admiralty. He agreed that it was highly desirable that there should be a closer connexion between the Architect's, the Engineer's, and the Works Departments, but added that the principal difficulties had arisen from the fact that in order to satisfy those who thought the Department would fail, it had been decided to treat the Department exactly as a contractor, and, although at a double cost, the Departments were organised to check one another. That course was, perhaps, justified on account of the great suspicion with which the Department was regarded. The time might arrive when a better understanding would prevail, and when it would not be thought necessary for one Department to supervise another. Being asked to account for the fictitious transfers, Mr. Ward said the Department was criticised very severely if it was not making a profit on particular jobs, while not getting credit in cases where a profit was being made; and it gave way to the temptation to hide or diminish the loss.

Mr. Gruning: To save its credit, in fact?—Yes.

In reply to Mr. Waterhouse, assessor, Mr. Ward said he did not think there would be any advantage in a separate staff for the book-keeping department; and with regard to the Architect's and Engineer's estimates, he said the Works Committee were not informed of the details. They only required to know the lump sum, which was stated in open Council. This was submitted to the manager, who reported whether he was satisfied with the sum. When any job was undertaken the manager took out his own bills of quantities. With respect to the early difficulties met with, Mr. Ward said one of their chief difficulties was to get good foremen. Good foremen and a good staff could only be got by a process of natural selection. He agreed with Mr. Blashill that at first they had not proper control over the works. In reply to further questions with regard to strikes, the witness said they had not been a source of difficulty for the Department, except in one case. The men knew that they would get paid the new rates of wages that a strike might establish without going out themselves, and the result was that the Department's works had gone on when others were suspended on account of strikes.

In reply to a question from Dr. Collins with regard to the malpractices, the witness denied that any instigation had been offered by any officer of the Department. The Comptroller had reported the matter to him during the recess, and it was upon his information that he had brought the matter before the Council.

Mr. Fletcher next examined the witness at considerable length, eliciting the admission that he would not advocate an unlimited extension of the principle of direct employment. The object the Department had in view was to get the work done as cheaply as possible, consistently with a good quality of work, and he thought that policy was in harmony with the general trend of public opinion. He could account for a certain amount of unpopularity by the fact that thousands of men had put down their names in the books, and many of them had failed to get employment, and were therefore disappointed. He did not know why a policy should be unpopular, of which the main object was to save, for the ratepayers, the middleman's profit. He did not know it was any part of their duty to protect contractors. He admitted that the County Council would hold a more im-

partial position as arbitrator in labour disputes if it confined itself to administrative work.

In reply to Mr. Torrance, Mr. Davies, and Mr. Beachcroft, the Chairman of the Works Committee entered into long explanations with regard to the complaints of the Architect of inferior ironwork, overcharges on repairs to a directing lamp at a fire-station, and of bad work on a 6-in. drain. With regard to the latter he said the Architect had been entirely misinformed. The drain referred to in Scotland Yard was not 160 ft., but only 14 ft. long, and was not a 6-in. but a 4-in. drain. The joints were left unfinished because the workman refused to continue the job. He admitted that the affairs of the Department might have been better managed if it had not been for the misunderstanding about the Fire Brigade station, that Mr. Blashill did his duty nobly to the Council, and that the Architect had had to struggle with great difficulties, through having too much work put upon him. The witness admitted that it had been an advantage to the Department to have its work subjected to criticism. He would put no limit on the work to be undertaken by the Department, provided it was done well and fairly cheaply. The examination of Mr. Ward was not concluded when the Committee adjourned to Wednesday, January 27.*

ARCHITECTURAL SOCIETIES.

NORTHERN ARCHITECTURAL ASSOCIATION.—The Students' Sketching Club of this Association held their seventh annual smoking concert and exhibition of drawings and sketches in the Grand Assembly Rooms, Newcastle, on the 26th ult., when about 100 members and friends were present. The Vice-President, Mr. Joseph Oswald, occupied the chair, and opened the concert. Those present included the hon. secretary, Mr. A. B. Plummer, and Messrs. J. T. Caskett, W. S. Hicks, H. C. Charlewood, W. L. Newcombe, W. Glover, T. H. Morton, C. S. Errington, S. Piper, &c. The musical arrangements included the provision of an orchestra of nearly twenty performers, and the evening was considered to be very successful. The whole arrangements were made by Mr. W. E. Fenwick and Mr. Harold Oswald.

LEEDS AND YORKSHIRE ARCHITECTURAL SOCIETY.—"Two Methods of Architectural Practice and Design" was the title of a lecture delivered on the 2nd inst. to the members of the Leeds and Yorkshire Architectural Society by Mr. W. H. Bidlake, of Birmingham. At the outset the lecturer explained that a variety of new forces, such as the introduction of machinery and the commercial spirit had destroyed the traditional method of building, and at the present time we were, he said, in a state of flux. In all probability a considerable period of time would elapse before anything like a single or definite aim again actuated architects to endeavour to bring about a more satisfactory state of affairs by eliminating thoughtless architecture, which was simply swayed by passing fashion, and, by being true to first principles, assist the development of some general evolution towards a new style. Mr. Bidlake took as typical examples the man who simply satisfied the present thoughtless demand, although he might be perfectly conscious that the public demand was not the right one; and, again, the man who had convictions and principles, and instead of being ready to sacrifice these for his commission, endeavoured to modify public opinion, and so brought about a period of better taste. The lecturer was at the close accorded a hearty vote of thanks. Mr. W. Watson, the President of the Society, occupied the chair.

GLASGOW ARCHITECTURAL ASSOCIATION.—On the 26th ult., the President, Mr. William Tait Conner, in the chair, Professor E. J. Mills, D.Sc., F.R.S., of the Glasgow and West of Scotland Technical College, delivered a lecture on "The Application of Photography to Architectural Measurement." He stated at the outset that the architectural capabilities of an ordinary camera, and consequently of an ordinary photographic print, were much greater than usually supposed. It was, however, necessary that the camera should be used with reasonable care, and especially that it should be (1) rigorously upright; and (2) parallel to the plane of building whose reproduction was desired. A single measurement on the plane itself would then give a scale for any part of the resulting negative or print. But operations were greatly facilitated by the simple graduation of the ground glass into squares and their sub-divisions; thus enabling the observer to obtain true parallelism at once, as well as verticality, and to measure also the height of an object's image. Professor Mills went on to explain how, by the aid of very simple mathematical formulæ, the height of a distant object, accessible or not, could be easily ascertained with a camera so provided. Among adjuncts to a measuring camera, a ball and socket support was shown for a half-plate camera. Professor Mills supports his lenses in rising and cross fronts, each provided with scales and verniers, and screw motion, which he uses for obtaining very delicate measurements of the dimensions of images in the ground glass. The lenses he prefers are ordinary Goerz and wide angle zeiss rectilinears. It was shown that by following very easy rules, the plan of a photograph could be readily drawn; an illustration of this was exhibited. The lecturer concluded with the exhibition of a number of architectural lantern slides, illustrating a variety of points referred to in the lecture. On the motion of Mr. Wm. Jas. Anderson, seconded by Mr. Alex. McGibbon, a vote of thanks was accorded to the Professor for his lecture.

THE ARCHITECTURAL ASSOCIATION OF IRELAND.—A meeting of this Association was held on Tuesday evening, at the Grosvenor Hotel, Dublin. Mr. R. Caulfeild Orpen occupied the chair, and an interesting lecture was given by Mr. W. J. Fennell, of Belfast, on "Some Old Buildings in Antrim and Down," which was illustrated by lantern. The lecturer gave some accounts of the ruins at Holywood, co. Down, the old churches at Newtownards and Movilla, and the very interesting ruins of the old Cistercian Abbey known as Grey Abbey, the Castle at Dundrum, the Cistercian Abbey known as Inch Abbey, and thence on to the historic town of Carrickfergus, with its fine old Church of St. Nicholas, and Antrim, with one of the best preserved round towers in Ireland, 92 ft. high, and 50 ft. circumference at base, Ballycastle, with its old Abbey and Gate House, and the extremely interesting stronghold of the McDonnell's Dunluce Castle. Mr. T. Drew having proposed, and Mr. McGloughlin seconded, the vote of thanks, the Chairman announced the next meeting for the 16th inst., when Mr. F. Batchelor will lecture on "Hospitals and Hospital Construction." The drawings done by members of the Advanced Class of Design (the subject being "A Village Public-house") were hung in the room, and attracted much attention.

ENGINEERING SOCIETIES.

THE INSTITUTION OF CIVIL ENGINEERS.—At the ordinary meeting of this Institution, on the 2nd inst., Mr. J. Wolfe Barry, C.B., F.R.S., President, in the chair, it was announced that seven associate members had been transferred to the class of members, and that seventeen candidates had been admitted as students. The monthly ballot resulted in the election of five members, of thirty-six associate members, and one associate.

SOCIETY OF ENGINEERS.—The first ordinary meeting of this Society for the present year was held on the 1st inst., at the Royal United Service Institution, Whitehall. Mr. Samuel Herbert Cox, the President for 1896, occupied the chair, and presented the premiums awarded for papers read during that year, viz.:—The President's Gold Medal to Mr. George Thudichum for his paper on "The Ultimate Purification of Sewage." The "Bersemer Premium" to Mr. D. B. Butler for his paper on "The Effect of Admixtures of Kentish Ragstone, &c., upon Portland Cement." The "Rawlinson Premium" to Mr. W. G. Wales for his paper on "Discharging and Storing Grain," and a "Society's Premium" to Mr. M. A. Pollard-Urquhart for his paper on "Examples of Railway Bridges for Branch Lines." Mr. Cox introduced the President for the present year, Mr. George Maxwell Lawford, to the meeting, and retired from the chair, receiving a hearty vote of thanks for his services during the past year. After briefly reviewing the work of the Society during the past year, the President drew attention to the steady reduction in the general death rate of this country during the last fifty years, and the comparative freedom from zymotic diseases, both of which were attributed to the progress of sanitary science and the impetus given to the practice and study of hygiene by the Public Health and River Pollution Prevention Acts. The provision of pure water and efficient drainage was the duty of the engineer, and on these two subjects, which are of such vital importance to all communities, the President based his address. After alluding to the discoveries of Pasteur and the influence of biology in its relation to the purification of water he contrasted the system of lake supplies, as instanced by the water undertakings of Glasgow, Manchester, Liverpool, and Birmingham, with the Metropolitan supply, which, coming from such polluted sources as the Thames and Lea, was entirely dependent for its bacterial purification on sand filtration. He further contrasted the successful municipal enterprise of the four cities mentioned with the working of the London Companies, which were managed solely in the interests of the shareholders, finally expressing the opinion that the London supply should be managed in the consumers' interests by a body from which party and political feeling should be entirely excluded.

APPLICATIONS UNDER THE 1894 LONDON BUILDING ACT.

AT the meeting of the London County Council on the 28th ult., the following recommendations of the Building Act Committee, in regard to applications under the 1894 London Building Act, were agreed to:—

Lines of Frontages.

Woolwich.—(*a*) That consent be given to the erection of one-story shops upon part of the forecourts of Nos. 13, 15, 17, 19, and 21, Lakedale-road, High-street, Plumstead, on the application of Mr. J. O. Cook on behalf of Mr. A. Hilder. (*b*) That so much of the application as relates to the proposed erection of a one-story shop in front of No. 23, Lakedale-road, be not acceded to; as the Council is not prepared to permit the erection of the shop, having regard to the objection of the owner of the property adjoining southward.

Greenwich.—That consent be given to the erection of a one-story addition in front of the "British Queen" public-house, Trafalgar-road, on the further application of Mr. H. Roberts on behalf of Mr. G. Burney.

Rotherhithe.—That consent be given to the erection of an open footbridge and gallery across Tooley-street, St. Olave's, Southwark, to connect Nos. 10 and 12 with Sun Wharf opposite, on the further application of Mr. S. Puplett, on behalf of Messrs. Culverwell, Brooks, & Co.

Westminster.—That consent be given to the erection of a block of residential flats on the south side of Birdcage-walk, on the site of Nos. 6 and 7 and a portion of the site of No. 5, Storey's-gate, and premises at the rear, on the further application of Mr. B. Slade.

Westminster.—That consent be given to the erection of a building with an open portico on the south side of Birdcage-walk, on the site of Nos. 2, 3, 4 and part of No. 5, Storey's-gate, Great George-street, on the further application of Mr. B. Slade, on behalf of the Institution of Mechanical Engineers.

Westminster.—That consent be given to the erection of buildings with projecting plinth, pilasters, bay window, balcony, and porch, at No. 12, Great George-street, at the corner of Little George-street, on the application of Messrs. A. Waterhouse & Son, on behalf of the Surveyors' Institution.

Norwood.†—That consent be given to the erection of No. 58, High-street, West Norwood, with a one-story projecting shop front, upon the flank next Ernest-street, on the application of Mr. J. W. Brooker, on behalf of Mr. C. B. Southby.

Clerkenwell.—That consent be given to the construction and erection of a porch to a detached house on the north side of Alexandra Park-road, at the corner of Muswell-avenue, on the application of Mr. H. D. Evans, on behalf of Mr. T. H. Evans.

Fulham.—That the application of Mr. W. Hall for an extension of the period within which the erection of four houses with shops on the south side of Fulham-road, at the corner of Burlington-road, was required to be completed be granted.

Hackney, Central.—That consent be given to the erection of five houses, with projecting bay windows, on the site of Nos. 133, 135, 137, 139, and 141, Haggerston-road, Dalston, on the further application of Mr. A. Woodward, on behalf of Mr. F. Bowcher.

Hampstead.—That consent be given to the erection of a balcony to overhang the public way in front of new bank buildings on the east side of Roslyn-hill, at the corner of Pilgrim's-lane, on the application of Mr. H. Field, on behalf of the Directors of Lloyd's Bank, Limited.

Holborn.—That consent be given to the erection of an iron footbridge across Lloyd's-court, Charing Cross-road, St. Giles-in-the-Fields, on the application of Messrs. Roumieu & Aitchison, on behalf of Messrs. Crosse & Blackwell, Limited.

Kensington, North.—That consent be given to the erection of an iron and glass covered way in front of No. 17, Dawson-place, Bayswater, on the application of Messrs. H. Corry & Son, on behalf of Mr. G. Pitts.

Marylebone, West.—That consent be given to the erection of an oriel window at the second and third

* A report of subsequent sittings of the Special Committee is held over until next week for want of space.

floor levels in front of Nos. 1 and 2, Duke-street, Lisson-grove, on the application of Messrs. Wylson & Long, on behalf of Messrs. Spencer, Turner, & Boldero.

Paddington, North.—That consent be given to the erection of an external iron staircase in front of No. 6, Blomfield-mews, Harrow-road, on the application of Messrs. New & Son, on behalf of Mr. W. Walker.

Rotherhithe.—That consent, granted December 1, 1896, to the erection of a one-story bay window in front, and of a two-story bay at the rear, of Pickle Herring Wharf offices, Pickle Herring-street, Tooley-street, on the application of Messrs. Mountford & Thompson, on behalf of Messrs. Hicks, Nash, & Co., as amended by the drawing, dated November 7, 1896, be modified by the omission of the words "and at the rear" immediately preceding the words "of the building be dedicated to and left open for the use of the public."

Stepney.—That consent be given to the erection of two oriel windows in front of proposed new buildings on the site of Nos. 384, 386, 388, 390, and 392 Commercial-road, on the application of Mr. Keith D. Young on behalf of the Society for Promoting Christian Knowledge.

Hackney, Central.—That consent be not given to the erection of a house on the north side of Blackstone-road, London Fields, to flank upon Lansdowne-road, on the application of Mr. W. H. Adams.

Wandsworth.†—That consent be not given to the erection of a covered way on the west side of "Angleholme," East Hill, to abut upon Acris-street, on the application of Mr. W. H. George on behalf of Dr. P. H. Davis.

Battersea.—That consent be not given to the retention of a timber store erected on the forecourt of No. 92, St. John's Hill, on the application of Mr. R. D. Hansom on behalf of Mr. T. Mills.

Fulham.†—That consent be not given to the erection of a harness-room at the rear of No. 746, Fulham-road, to abut upon Dorncliffe-road, on the application of Mr. S. E. Storr, on behalf of Dr. Eland Stewart.

Hackney, South.—That consent be not given to the erection of one-story shops upon the forecourts of Nos. 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, and 226, Morning-lane, on the application of Mr. W. Hall, on behalf of Mr. T. W. Webber.

Hampstead.—That consent be not given to the erection of an addition on a portion of the forecourt of a house known as "Daydawn," No. 7, Netherhall-gardens, South Hampstead, on the application of Mr. D. Brown on behalf of Mr. L. Sinclair.

Kensington, South †—That consent be not given to the erection of an iron and glass covered way over part of the footpath in front of the Maisonettes Hotel, Nos. 28 and 30, De Vere Gardens, on the application of Mr. C. A. Daw.

Lewisham.—That consent be not given to the erection of a one-story wash-house on a site between Nos. 68 and 70 Honor Oak-road, Forest-hill, on the application of Mr. S. E. Musgrove.

Marylebone, East.—That consent be not given to the erection of an open iron bridge across Berner's-mews, to connect Nos. 1 and 3, Mortimer-street with Nos. 51 and 52, Newman-street, on the further application of Mr. J. Slater on behalf of Mr. E. Penton.

Strand.—That consent be not given to the erection of a sheet-iron sign, to overhang the public way, in front of Faraday House, Charing Cross-road, St. Martin-in-the-Fields, on the application of Mr. H. Fould, on behalf of the Electrical Standardising, Testing, and Training Institution.

Westminster.†—That consent be not given to the erection of an iron and glass covered way at the Francis-street entrance to the Army and Navy Mansions, Nos. 109, 111, 113, and 115, Victoria-street, on the application of Mr. C. J. C. Pawley, on behalf of Mr. W. Goodwin.

Westminster.—That consent be not given to the erection of projecting porches, a bay window, and an angle oriel and turret at No. 54, Parliament-street, at the corner of a footway leading to Cannon-row, on the application of Mr. A. Williams, on behalf of Messrs. Grindlay & Co.

Width of Way.

Southwark, West.—That consent be given to the erection of a gymnasium on the north side of Earl-street, at the corner of Kell-street, St. George-the-Martyr, with the forecourt fence at less than the prescribed distance from the centre of Earl-street, on the application of Mr. Rowland Plumbe on behalf of the Borough-road Polytechnic.

Woolwich.—That consent granted on October 27, 1896, to the erection of a temporary wood and iron entrance and cloak-rooms to the school building on the west side of Knee-hill, Plumstead, to abut upon, and with the boundary-fence or wall in front of such entrance and cloak-rooms at less than the prescribed distance from the centre of a footpath leading from Knee-hill, on the application of Mr. T. J. Bailey, on behalf of the School Board for London, be modified by the omission of the condition as to the setting back, without compensation, the portion of the boundary-fence or wall next the said footpath the prescribed distance from the centre of that footpath, when required by the Council so to do.

Greenwich †—That consent be not given to the rebuilding of No. 17, Woolwich-road, with the new portion of the flank of the building to abut upon Hatcliffe-street, on the application of Mr. W. A. Finch, on behalf of Mr. W. A. J. Hensler.

Greenwich.†—That consent be not given to the extension of a portion of No. 45, Woolwich-road, at less than the prescribed distance from the centre of Commerell-street, on the application of Mr. W. A. Finch, on behalf of Mr. W. A. J. Hensler.

Hackney, South.—That consent be not given to the erection of two additional stories upon the existing one-story shops at Nos. 120 and 122, Morning-lane, at the corner of Back-lane, on the application of Mr. J. Hamilton, on behalf of Mr. E. Stevens.

Poplar.†—That consent be not given to the erection of two houses on the north side of Manilla-street, Millwall, at the corner of Alpha-road, in the position and with a portion of the forecourt boundary of the house next the latter road as shown upon the plan submitted with the application of Messrs. J. and S. F. Clarkson, on behalf of Mr. W. Legg.

St. George-in-the-East.†—That consent be not given to the retention of a temporary wood and iron shop and store erected on the north side of Watney-passage, at the corner of Winterton-street, on the application of Mr. F. Parker, on behalf of Mr. Craze.

Width of Way and Space at Rear.

Paddington, North.—That the Council in the exercise of its powers, under Sections 13 and 41 of the London Building Act, 1894, do not consent to nor permit the erection of an addition, not to exceed 30 ft. in height at the rear of "Carlton-vale Tavern," No. 33, Carlton-road, Maida-vale, at less than the prescribed distance from the centre of a road leading to Paddington recreation ground, on the application of W. J. Ancell, on behalf of Mr. G. C. Butcher.

Southwark, West.—That Messrs. F. S. Brereton & Son be informed that their application on behalf of the trustees of Marshall's Charity for the Council's consent to and allowance of the erection of twenty-three houses on the west side of Webber-row, St. George-the-Martyr, on the site of Nos. 7 to 31, Webber-row and 72, Webber-street, with the flank of the northernmost building and the fence or boundary in front of such houses at less than the prescribed distance from the centre of Webber-row and Webber-street respectively, and with an open space not in accordance with the rules of the Act at the rear of the eight southernmost houses in the row as shown upon the plans submitted with the application, having been further considered, the Council sees no reason to depart from its decision of December 1, 1896, not to grant the application.

Open Space about Buildings.

Hackney, South.—That the Council do, in the exercise of its powers under Part V. of the London Building Act, 1894, permit the erection of one-story stabling and of a two-story engine-house and offices in a yard leading out of Chelmer-road, Homerton, with open spaces about such buildings, on the application of Mr. R. Peters, on behalf of Mr. F. Adams.

Kensington, South.—That the Council, in the exercise of its powers under Section 41 (1), iii. (*h*), of the London Building Act, 1894, do allow the erection of a five-story addition at the rear of No. 10, Brompton-square, to abut upon an open space as shown upon the plan submitted with the application by Mr. E. W. Parker, on behalf of Mr. J. Davies.

St. George, Hanover-square.—That sanction be given to such deviations from the plan certified by the District Surveyor, under Sections 13 and 43 of the London Building Act, 1894, of the space previously occupied by buildings at Nos. 141 and 142, New Bond-street, and premises at the rear fronting upon Bloomfield-place, as would permit of the erection upon that site of a building, on the further application of Mr. F. W. Foster on behalf of Mr. A. Coombs.

Brixton.—That the Council in the exercise of its powers under Section 41 of the London Building Act, 1894, do not allow a modification of the provisions of that section with regard to open spaces about buildings, so far as relates to the proposed erection of three blocks of residential flats, with shops on the ground floor, on the west side of Coldharbour-lane, next No. 18, with irregular spaces at the rear of such flats, on the application of Mr. J. T. Holmes, on behalf of Mr. H. Wood

Paddington, South.—That the Council, in the exercise of its powers under Section 41 of the London Building Act, 1894, do not permit the erection of an addition upon a portion of the open space at the rear of No. 9, Gloucester-square, Hyde Park, at the corner of Devonport-street, on the application of Messrs. Mullett, Booker, & Co., on behalf of Mr. W. P. W. Norsworthy.

Line of Fronts and Width of Way.

Wandsworth.—That consent be given to the erection of a one-story addition to the Holy Trinity National School for Boys, Trinity-road, Upper Tooting, to the line, and with the forecourt boundary at less than the prescribed distance from the centre of the road, on the application of Mr. C. E. Sayer on behalf of the Rev. J. H. Potter.

Brixton.—That consent be not given to the erection of buildings on the site of Nos. 6a, 6, 8, 10, 12, 14, 16, &c., Coldharbour-lane, on the application of Mr. J. T. Holmes, on behalf of Mr. H. Wood.

Kensington, South.—That consent be not given to the erection of an enclosed covered way, constructed of glazed wood sashes and brickwork, upon part of the forecourt of No. 2, Victoria-road, on the further application of Mr. H. G. Ibberson, on behalf of Mr. H. Hampton.

Formation of Streets.

Woolwich.—That an order be sealed and issued to Mr. T. J. Young, sanctioning the formation or laying out of an extension 40 ft. wide, for carriage traffic, of Abbey-grove, Plumstead, and the widening of portions of Bostal-lane and Bostal-manorway, on his application to the Council, on behalf of Messrs. J. & C. E. Pearson. That the name Abbey-grove (in continuation) be approved for the new street. That as the land upon which the extension of Abbey-grove is proposed to be formed appears to be below Trinity high-water mark, the attention of the Local Authority and of the applicant be called to the regulations made by the Council under the provisions of Part XI. of the London Building Act, 1894, with regard to the erection of dwelling-houses upon low-lying land.

Lewisham.—That an order be sealed and issued to Mr. J. Norton, refusing to sanction a deviation from the plan approved on December 19, 1893, for the formation or laying out for carriage traffic of Rhyme-road, Molesworth-street, by partially widening and diverting the course of that road as shown by the amended plan and particulars dated December 7, 1896, on his further application to the Council.

Cubical Extent.

Finsbury, East.—That consent be not given to the erection on a site between Old-street and Banner-street, at the corner of Bunhill-row, St. Luke, Old-street, &c., of three blocks of buildings each to exceed in extent 250,000 cubic feet, and to be used only for the purposes of the manufacture of Bovril, and that the Council do not allow a modification of the provisions of Section 54 (*a*) of the London Building Act, 1894, with regard to the thickness of the recesses under the windows on the third floor of the block of buildings next Old-street, on the application of Mr. H. V. Lanchester, on behalf of the Bovril Company, Limited.

Recommendations marked † are contrary to the views of the Local Authorities.

Correspondence.

To the Editor of THE BUILDER.

"EXPERT" EVIDENCE.

SIR,—The other day I was waiting to give evidence in one of the Queen's Bench Courts, and listened to the trial of an action for obstruction of light.

The defendant relied on the evidence of a man who in the box described himself as a "builder, sanitary engineer, member of the Society of Arts, and light and air expert." This fellow—who had not an "h" to his vocabulary—endeavoured to teach the judge that the defendant had rather improved the light of the plaintiff's house by the substitution of a stock brick wall 20 ft. high, and 7 ft. distant from the windows, for a formerly existing low fence backed by a row of trees, which it was admitted by the defendant's own witness were spaced some 10 or 12 ft. apart.

Of course, the plaintiff won and got damages. That, however, is by the way. What impressed me was the fact that it should be possible for evidence from such a witness to be tendered at all on an expert point. I wonder what would happen if a judge were asked to receive testimony upon questions of law and medicine from a barrister's wig maker and a manufacturer of surgical instruments?

HARVEY DYBALL.

London, January 29, 1897.

THE CAPITAL AND COUNTIES BANK (BRISTOL BRANCH).

SIR,—Referring to the article on Bristol architecture in your last number, the Capital and Counties Bank in that city is the extension of a building which was erected from my designs, and illustrated in the *Builder* of December 12, 1885

FRED. MEW.

9, *Gordon street, Gordon-square, W.C.*

KING'S COLLEGE SCHOOL.—It is stated that the Council of King's College, London, have acquired South Hayes, with about 6 acres of ground, at Wimbledon Common, whither the school will migrate after the current term. Until recently nearly all the school class-rooms were in the basement floor—on a level, though, with the small playground at the back, bounded by Strand-lane—of the buildings erected, after Sir Robert Smirke's designs, upon the establishment of the College in 1828; for the Hospital, founded in 1839, the present building was begun in 1852. Several eminent men have had their education here.

The Student's Column.

SPECIFICATIONS.—VI.

CARPENTER.

IN specifying the materials for this trade, the architect should make up his mind definitely as to the precise grade of quality which he desires and then define that grade clearly and insist upon its being supplied. To do this requires a good knowledge of the timber market, and of the current prices and supply. The marks on timber are constantly changing, and the quality of the various classifications of different shippers is widely divergent, hence the knowledge required to accurately specify the quality of timber needs constantly to be revised and brought up to date. We give examples of various methods of specifying timber.

Materials.—The whole of the fir timber is to be of the best Memel, Dantzic, or Riga. The deals to be the best quality seasoned Christiania. The timbers and deals are to be cut die square, entirely free from sapwood, shakes, large, loose, or dead knots, and all other defects.

(This is the oldest fashioned form now in use, and, in spite of its apparent stringency, is in reality delightfully vague. The term "best" has no real significance. The quality of Memel, Dantzic, and Riga timber is not equal, nor are these the only ports from which high-class timber can be obtained; whilst Christiania may almost be said to be the one port from which the deals for any particular work will most likely not come). As another example of a clause not intended to be unduly strict, but meant to imply average quality, we have the following:—

Materials.—The timber for carpenter's work to be good quality yellow fir timber from Baltic ports, cut out of baulk where necessary, but in other cases converted from boards, free from sap, large or loose knots, shakes and other defects, all to be well seasoned and sawn die square, and to hold the specified scantlings when finished. No outside slabs or sapwood to be used, and no pitch pine or other American timber to be used for carpentry without special permission from the architect. (If the architect wishes the scantlings, figured or specified, of his woodwork to hold full when finished it is necessary to state it, as the custom of the trade, both of carpenter and joiner, is to allow for waste in working. There are many advantages in using converted timber rather than cutting from baulk, chief amongst which are better seasoning, and as a general rule better quality. In spite of the increased labour of working, pitch pine is, for reasons sufficiently obvious, greatly in favour with present day builders in preference to Baltic fir, and its use should therefore be guarded, as discretion is required.) Again as a further example we may specify thus, bearing in mind that practically there are four qualities of fir timber, viz., "Crown," "best middling," "good middling," and "common middling," and that boards have "Crown" and "Crown brack" as superior though little used qualities to 1st, 2nd, 3rd, 4th, and 5th quality.

Materials.—The timber for carpenter's work to be Crown Memel or other approved fir of equal quality where cut from baulk and of a quality equal to Petersburgh 1st where cut from deals. (The architect will, of course, use his own discretion as to the selection of the quality or brand that is to form the criterion of excellence. Crown Memel, for example, is far superior to the timber generally employed in building.) Having settled the question of quality, the specification will proceed as follows:—

Distances Apart.—No joists, rafters, or quarters to be fixed more than 12 in. apart in the clear, and all to be properly trimmed for fireplaces, chimneys, &c. The trimmers and trimming ratters and joists to be in all cases ½ in. thicker than the ordinary timbers. (In some cases it may be desirable to still further increase the thickness of trimmers. Where this is so, the particular instances should be mentioned, as the clause given will apply generally.)

Lintols.—Put lintols where required to internal openings of all plastered rooms 1 in. in depth for every foot of span, the full width of reveals and 12 in. longer than the respective openings, but in no case less than 3 in. deep.

Centres, &c.—Supply all requisite centring for arches, turning pieces, springers, templates, &c., the trimmer arches to be fitted down and filleted (or centres left in) to receive lathing, and no centre to be struck until sanctioned by the architect. Supply and fix all necessary bracketing and cradling.

Fixing for Joinery.—Insert in jambs of all openings to be fitted with joinery wood slips ⅜ in. thick, 4½ in. wide, and in length the full width of opening, built into and securely fixed in the joints of brickwork. (If wood bricks or breeze concrete fixing blocks are preferred, specify accordingly).

Bressummers and Binders.—The bressummers over. . . . to be formed of No. 4 9 in. by 3 in. deals bolted together with ¾ in. wrought-iron bolts with heads, nuts, and washers, No. 6 to each bressummer. The bressummers to be 18 in. longer than opening, and to have 3-in. tooled Yorkshire stone templates, 14 in. by 14 in. under ends. The binders. . . . to be 6 in. by 4 in. and 12 in. longer than span, and to rest on 3-in. tooled Yorkshire stone templates, 9 in. by 9 in.

Floor Joists.—The timber floors to be formed with joists of the following scantlings, all to be properly notched and spiked to 4½ in. by 3 in. plates, which are not to be built into walls, but carried on corbelling of two oversailing brick courses where plaster cornices allow, and elsewhere on wrought iron corbels, weight 7 lbs. each, built into walls every 3 ft. apart. Joists to ground floor rooms, 5½ in. by 3 in.

Joists to first floor rooms over scullery, larder, pantry, and servants corridor to be 7 in. by 2½ in., over remainder of ground floor 9 in. by 3 in.

Herringbone Strutting.—All floors of first floor to have herringbone strutting 2½ in. by 1½ in., not more than 6 ft. apart.

Sound Boarding.—Put between joists of floors over reception-rooms, ½ in. sound boarding on 1½ in. by 1 in. fillets, and lay pugging, 2 in. thick, of chopped hay and lime, in proportion of 4 to 1, laid dry.

Roofs.—(If the roofs are fully and clearly shown on the drawings, it may be sufficient to say:) The roofs of buildings and the trusses to same to be framed up, as shown upon drawings with timbers of the sizes figured thereon. The rafters to be notched down upon purlins and plates, cut true at the ridges, and securely spiked thereto. (Or the particulars may be given thus:) The roof over offices to be framed with three king post trusses, the beams 9 in. by 4 in.; principal rafters, 6 in. by 4 in.; struts, 4 in. by 4 in., and 1 inch circular wrought-iron king-rod, with wrought-iron plate at head, 18 in. long by 4 in. wide, and ½ in. thick, forged to shape and bolted with No. 2 ½ in. bolts to principals. Put inch wrought-iron bolts, 18 in. long, fixed solid through tie beams and feet of principal rafters. Purlins to be 6 in. by 4 in.; ridges, 9 in. by 2 in.; common rafters, 4½ in. by 2½ in.; hips and vallies, 7 in. by 3 in.; plates, 4½ in. by 3 in. The main roof to have four king-post trusses, tie-beams, 10 in. by 4½ in.; principal rafters, 7 in. by 4½ in.; struts, 4½ in. by 4½ in.; and 1¼ in. circular wrought-iron king-rod with wrought-iron plate at head, 20 in. long by 4½ in. wide and ⅝ in. thick, forged to shape and bolted with No. 2 ⅝ in. bolts to principals. Put 1¼ in. wrought-iron bolts 20 in. long fixed solid through tie beams and feet of principal rafters. Purlins to be 7 in. by 4½ in.; ridges, 9 in. by 2 in.; common rafters, 5 in. by 3 in.; hips and vallies, 7 in. by 3 in.; plates, 4½ in. by 3 in.

Boarding and Battening.—Cover main roof with inch rough boarding and McNeill & Co.'s bituminous, inodorous felt, lapped 2½ in. at edges, and nailed to boarding with zinc or compo clout nails. Lay over the roof to offices 1½-in. by 1-in. battening, set out to 3½ in. gauge for tiling (or to the proper gauge for slating).

Flat.—The flat over porch to have 5½-in. by 2½-in. joists, 4 in. by 3-in. plates, and to be laid with 1¼-in. deal traversed boarding edges shot for lead, laid to fall with the necessary firrings. Put 2-in. rounded deal rolls for lead, 3 ft. centre to centre.

Gutters.—Lay the gutters with 1¼-in. gutter boards and framed bearers to a fall of 1½ in. in 10 ft., with 2½-in. cross rebated drips 9 ft. apart. The gutters to be 9 in. wide at the narrowest part. Form deal dovetailed cesspools, 8 in. by 8 in., and 6 in. deep, for outlet of gutters, with proper dished and rebated perforation for 4-in. pipe.

Snow Gratings.—Lay over all gutters deal wrought snow gratings of 2-in. by 1½-in. battens, about 1 in. apart, on 4-in. by 2-in. cut and shaped bearers, about 3 ft. apart. These gratings to be made in 6-ft. lengths for easy removal, and to be put together in white lead and pinned with oak pins and creosoted.

Lier Boards and Tilting Fillets.—Put ¾ in. by 7 in. lier boards at sides of gutters and vallies and along slopes of roofs adjoining vertical faces and deal tilting fillets 1½ in. by 1 in. To eaves put tilting fillets 3½ in. by 1½ in.

Eaves.—Put ¾-in. by 7-in. wrought and beaded fascia to eaves (or instead the treatment of eaves may be specified thus): The feet of rafters to project 12 in. from face of wall, and to be wrought and the ends shaped to detail with wrought sprocket pieces 18 in. long by 3½ in. wide and the full thickness of rafters. (If the under side of eaves is boarded specify it; if to be plastered, say.) Put under eaves on feet of rafters and also plugged to wall, 1½-in. by 1½-in. fillet to receive lathing.

Half-timbering.—The half-timbering to be of well-seasoned fir, with 7-in. by 4½-in. posts and beams out of 11 in. by 6 in., and heads 4½ in. by 4½ in., left as from the saw, put together in white lead and pinned with 1½-in. oak trenails left projecting ½ in. from face of timbering. This half-timber work is to be cut out immediately after signing of the contract, and to be properly creosoted to absorb 10 lb. weight of creosote per cubic foot. The contractor is to arrange for the weighing of the worked timber in the presence of the architect, before it is despatched to the creosoting works, and also on its return before fixing.

Barge-boards.—The barge-boards to be 2-in. wrought and cross-tongued yellow deal 15 in. wide on main roof, and 12 in. wide on roof of offices, all to be moulded on lower edge, and to have 4½-in. by 2-in. moulding planted on to the other. (If moulding is returned at foot, say so. Also specify apex finials if desired.) The barge-boards to be mitred and cross-tongued at apex.

GENERAL BUILDING NEWS.

PROPOSED ADDITION, CHURCH OF ST. LUKE, DEEPLISH, ROCHDALE.—An effort is now being made, it is stated, to complete the Church of St. Luke, Deeplish, Rochdale, by the building of the nave. The present nave is entirely of a temporary character, and the chancel, designed by Mr. R. Knill Freeman, cost 2,700*l.* Further plans have been prepared by the same architect, which will require about 3 300*l.* to carry out.

BUSINESS PREMISES, DUBLIN.—New premises in Henry-street, Dublin, are being erected for Messrs. Arnott & Co. The architect for the entire works is Mr. George P. Beater. The contractors are Messrs. H. & J. Martin for the general building work; Messrs. Homan & Rodgers for the fire-proof construction; Messrs. Cummins Brothers for the electric installation; Messrs. Waygood for the electric lifts; and Messrs. Haywood & Co. for the patent glazing of roofs.

HOSPITAL, INVERURIE, ABERDEEN.—The fever hospital which has been erected at Inverurie has been built by the Garloch District Committee and Inverurie Town Council. The hospital, of which Messrs. Jenkins & Marr, Aberdeen, were architects, consists of a ground floor and attics. The cost of the hospital has been about 2,000*l.* The contractors were:—Mason—Mr. William Lauder, Inverurie; carpenter—Mr. James Milne, Inverurie; plasterer—Mr. Robert Moir, Inverurie; slater—Mr. S. Christie, jun., Dyce; and plumber—Messrs. Laing & Sons, Inverurie.

PROPOSED NEW THEATRE AT HOLBECK, LEEDS.—At a meeting of the Leeds Building Clauses Committee recently, it was reported that Mr. Hainsworth (the Building Inspector), together with two or three members of the committee, had had an interview with Mr. Rhodes, the architect who has prepared plans for the erection of a new theatre at Holbeck, and that the latter had agreed to make additional entrances and to improve the access to the gallery. The committee being now satisfied with the amended plans passed them.

CHURCH EXTENSION, SEFTON PARK, LIVERPOOL.—The Mission Church of St. Pancras, Sefton Park, was recently opened. The church is subsequently to be used as a parish room and Sunday school, &c. Adjoining this is the choir vestry, and between the latter and Lidderdale-road will ultimately be built a permanent church capable of accommodating 800 people. Pending the erection of the church the services will be conducted in the mission church, which is 60 ft. by 30 ft. The ceiling has a height of 29 ft. The building is of grey brick, with red brick quoins, and Rainhill sandstone dressings to the doors and windows. The choir vestry is 23 ft. by 16 ft., and the roof is panelled in pitch pine. The lead glazing has been executed from the architect's designs by Messrs. Williams & Watson, and the zinc roofing by Braby & Co. The architects are Messrs. H. & A. P. Fry, Liverpool, and Messrs. Morrison & Sons, Wavertree, have been the general contractors. The heating work has been carried out by Messrs. Killick & Cochrane.

ST. MARGARET'S CHURCH, JUNIPER GREEN, EDINBURGH.—A dedication service took place recently in St. Margaret's Church, Juniper Green, which has just been completed from plans by Councillor R. M. Cameron, architect, Edinburgh. The church, which has cost 5,000*l.*, is seated for six hundred people. At present the only part of the church unfinished is the tower. The fabric is a Gothic structure, crucifix in form, with side aisles, a centre nave, north and south transepts, chancel, and

apse. The nave is separated from the side aisles by five pointed arches, while the transepts and chancel are spanned in single arches from the large piers of the central square tower which rises above the building. A barrel-shaped timber roof extends along the whole length of the building, and is divided into bays by moulded ribs. A stone-arched organ chamber is placed near the chancel and south transept.

RESTORATION OF EAST TUDDENHAM CHURCH, NORFOLK.—The parish church of All Saints, East Tuddenham, has been undergoing interior restoration, Mr. G. H. Green, being the architect, and Mr. C. S. Smith, of Norwich, carrying out the work under his directions. A new floor (with the exception of the centre passage in the nave) has been put down throughout, on a bed of concrete, wood blocks being placed by the London Wood Floor Company under all the sittings. The chancel and nave have been reseated, the pulpit and prayer-desk altered and moved, and the reredos enlarged.

SCHOOL, GRANTHAM.—By the completion of the new school for infants, on Launder-terrace, Spittlegate, Grantham, additional accommodation for 348 children is provided. Messrs. Green & Wright are architects, and the contract was entrusted to Messrs. Walker Brothers & Parks. The new school—which is intended for infants only—is constructed of red brick, with Ancaster stone dressings. The large room facing Launder-terrace is capable of accommodating 216 children. It can be divided, if occasion requires, by two sliding screens. This room is heated by three open fireplaces. Two large classrooms, each with a gallery, open from this apartment. A small room is set apart for the use of the teachers.

SALVATION ARMY BARRACKS, HARROGATE.—Memorial stones were laid recently in connexion with the erection of the new Salvation Army Barracks in Beulah-street, Harrogate. The site cost 8,000*l.*, but the lower portion of the Army saloon will be utilised for shops. The architects for the building are Messrs. H. E. & A. Bown, of Harrogate; and the contractors, Messrs. Rhodes Bros., of Shipley.

ALTERATIONS, FREE ST. GEORGE'S CHURCH, MONTROSE.—Free St. George's Church, Montrose, has been re-opened after being altered and improved. Messrs. Matthew & M'Kenzie, Aberdeen, were the architects, while the contractors were:—Masons, Messrs. Reid & Burnett; joiners, Messrs. J. & W. Craigie; glazier, Mr. Douglas; heating, Mr. Alexander Moug; plumbers, Messrs. Christie & Smith; and painter, Bailie Adamson.

CASUAL WARDS, ST. PANCRAS.—New casual wards have been erected in Holmes-road, Kentish Town, at a cost of nearly 11,000*l.* The new wards will accommodate forty-eight males, eighteen females, and six children. The site has a frontage of 125 ft. to Holmes-road, and an average depth of 250 ft. The front or official block is a red brick structure occupying the centre of the frontage, and standing back in a wide forecourt with a cartway entrance on either side. To the rear of this block is the main building, stretching away for a length of nearly 200 ft. to the rear, and terminating in a railed yard communicating with the oakum store, sanitary offices, and the mill room. The accommodation for males is on the ground floor, and each inmate is provided with a separate cell or sleeping apartment, which will be fitted with a hammock. The women have similar accommodation upon the upper floor, the apartments to be used by women with children being of larger area, and the whole fitted with beds in lieu of hammocks. The whole of the sleeping apartments are warmed by hot-water pipes, and in each is a push connected with an electric bell and indicator in the superintendent's office. Separate entrances are provided for each sex, with covered shelters for those who arrive before the regulation time. These give access to the entrance lobbies. The bathrooms are fitted with porcelain baths, supplied with hot and cold water. From the bathrooms run long corridors, giving access to the sleeping apartments. In the basement of the front block is a small laundry, fitted by Messrs. Bradford & Co. Here also is a Lyons steam disinfector, with boiler and other necessary appliances, and the hot-water boilers for warming the building and for supplying the bath water. The ordinary labour test at casual wards is stone-breaking and oakum-picking, and working cells have been provided for this purpose in connexion with some of the men's dormitories. Seeing, however, that these tasks are easy for the habitual tramp and hard for the occasional wayfarer, it is proposed to adopt a corn-grinding test, which gives no advantage to the expert. The grinding shed contains a central mill room, with accommodation for twenty-two hand-mills and a flour-dresser. Each mill handle is in a separate bunk for the use of one man, and a crank, for the use of twelve men, works the dresser. The building is so arranged that the men on mills or dresser have no access to the mill room, but small glazed openings in the division walls enable the official in charge of the mill room to see each man at work, and the men themselves to note the progress they are making with their tasks, small strips of glass being let into the hoppers of the mills for this purpose. Above the mill room is a corn and flour store. The buildings generally are of plain stock brickwork, but the block next Holmes-road is faced with red bricks with moulded brick and stone dressings. The floors throughout are of concrete. The surface finish of the greater portion is limestone and cement, but the day rooms and entrance lobbies are finished with terrazzo and the officers' rooms with wood flooring. The buildings have been erected by Messrs. T. Gregory & Co., of Clapham Junction, from the plans and under the superintendence of Messrs. A. & C. Harston, architects, Mr. G. Poole acting as clerk of the works. The contract sum was 10,697*l.*—*St. Pancras Guardian.*

WESLEYAN CHURCH, CROWBOROUGH, KENT.—The foundation-stone of the new Wesleyan Church, at Crowborough, was laid recently. When completed, it will accommodate over three hundred people, the inside measurements being 56 ft. 6 in. by 34 ft. 6 in., and there will be a schoolroom providing for a hundred children. The building is faced externally with local stone, Bath stone being used for the chief features. Mr. F. Boreham is the architect, and Mr. G. Beard, of Crowborough, the builder. The scheme involves an expenditure of 1,450*l.*

RECREATION-ROOM, GIRLS' HIGH SCHOOL, LOUGHBOROUGH.—A new recreation-room has been erected at the Loughborough Girls' High School. Plans were prepared by Mr. G. H. Barrowcliff, and the contract was placed in the hands of Mr. A. Faulks.

RESTORATION OF RAVENFIELD CHURCH, YORKSHIRE.—On the 28th ult., the new pulpit and font of St. James's Church, Ravenfield, near Rotherham, were dedicated. In addition to necessary repairs, &c., the church has been reseated with pitch pine benches, a carved oak reredos has been erected, and the walls of the sacrarium hung with curtains, the semi-dome above having a colouring of blue, studded with gold stars. The pulpit is of oak, with open panels of tracery. The font is also of oak. It is octagonal in shape, and has carved panels. The restoration has been carried out from the designs and under the superintendence of Mr. E. Isle Hubbard, of Rotherham, by Mr. J. Wortley, of Rotherham. Nearly the whole of the carved work has been done by Mr. Glenn.

ASYLUM BUILDINGS, BODMIN, CORNWALL.—Mr. Silvanus Trevail, of Truro, has, we hear, been appointed architect of the new county asylum buildings at Bodmin, which are to be erected at a cost of about 40,000*l.*

PUBLIC HALL, TEIGNMOUTH.—A site for a public hall has been secured in Station-road, Teignmouth, running back to Lower Brook-street, and the building is to be so constructed as to be capable of use for theatricals, bazaars, &c., with lobbies and cloakrooms, and separate exits into each street. The length of the hall will be 92 ft., and the width 43 ft., with height to the roof of 36 ft., and seating accommodation for 500 to 600 persons. The architects are Messrs. Watson & Watson, of Torquay.

SCHOOL, LEYTONSTONE, ESSEX.—The memorial stone of the new boys' school at Newport-road, Leytonstone, was laid recently. The works of enlargement comprise:—1. A separate and distinct school building for 600 boys. 2. The addition to girls' department of the rooms now occupied by boys. 3. The addition of a class-room to the infants' department. 4. The erection of a house distinct from the school buildings for the caretaker. Boys' school: The new school building is designed to accommodate 600 boys on two floors, five class-rooms on each floor, the school places per room varying from fifty to seventy, to allow of the varying numbers in the classes. On the ground floor is a hall, 60 ft. long by 35 ft. wide, for assembly drill and other physical exercises. All the class-rooms are entered from this hall, those on the upper floor by means of a gallery extending the whole length of one side of the hall. Staircases are provided to the upper floor at both ends of the building, and cloakrooms and lavatories on each floor. Rooms for the master and assistant teachers are provided on the upper floor. The floors throughout will be constructed with steel joists and concrete, on which will be laid solid wood block flooring. The caretaker's cottage is being erected at the junction of the two roads, and will command the entire length of the two frontages. The contract for the entire work amounts to 8,772*l.*, and is being carried out by Mr. F. J. Coxhead, of Leytonstone, under the supervision of Mr. William Jacques, of London, the Board's architect.

REOPENING OF GREAT BADDOW CHURCH, ESSEX.—On the 24th ult., after having been closed six months for repairs, the parish church of Great Baddow, near Chelmsford, was reopened. The work has been carried out by Messrs. Choat & Sons, of Chelmsford, under the superintendence of Mr. Charles Pertwee, architect.

PROPOSED NEW TOWN HALL FOR COLCHESTER.—The Municipal Offices Special Committee of the Colchester Corporation have been deliberating as to whether a new town hall should be built or whether the existing erection should be modified and added to. They have had reports from Mr. E. W. Mountford, and from Mr. Binyon, Ipswich. Mr. Mountford's report is to the effect that the present town hall hardly contains a sound plank, and that it is dangerous. To pull it about would be dangerous and costly. He estimates that if it were retained, the cost of the necessary additional work would not be less than 14,000*l.* or 15,000*l.*, while the result would be unsatisfactory. In a new town hall, a hall to seat 500 persons, a Council chamber, mayor's parlour, committee-rooms, and sets of rooms for all the borough officials, together with Quarter and Petty Sessions courts, cloakrooms, and retiring-rooms for persons engaged in the business of the courts would be absolutely necessary, and this would make a grand total of 24,192 square feet of required floor. To meet this there was at disposal the site of the existing hall, Joslin's premises, a store building, engine-house, yard, and police offices, which left little to spare. As regards the style of building, he favours the free classical treatment, red bricks for the fronts, the principal fronts being treated in a simple and broadly dignified manner, such money as could be spared being spent in employing a good sculptor to illustrate the town's history, an idea carried out with good effect at Sheffield, Northampton, and elsewhere. A perfectly new building, exclusive of fittings, would cost between 18,000*l.* and 20,000*l.* Mr. Binyon reports that, notwithstanding defects, he is of opinion that the existing building could be made thoroughly sound for from 700*l.* to 1,000*l.* He has, however, no doubt that the best results would be obtained by pulling down the present building. He considers that a town hall might be provided for 30,000*l.*, or with cost of furnishing, architect's commission, &c., a total of 35,000*l.* The cost of altering the existing structure, and adding municipal offices, he estimates at 15,000*l.* As to the style of architecture, he favours a Jacobean or a later form of English Renaissance. The site, he adds, lends itself to the most effective introduction of a fine tower. The committee have decided on the recommendation they will make, and it is said they do not favour the patchwork scheme. —*Essex County Chronicle.*

SANITARY AND ENGINEERING NEWS.

DRAINAGE OF WEST HARTLEPOOL.—The Borough Engineer of West Hartlepool, Mr. W. Brown, has just issued his report to the Town Councillors of the Borough on the existing sewers of West Hartlepool, with suggested remedial measures and extensions. In regard to the remedial measures Mr. Brown says "to fully provide for all trade and domestic sewage forty gallons per head of population per twenty-four hours is regarded by many experts as a proper provision, but, after fully considering the requirements of West Hartlepool, I have come to the conclusion that thirty-five gallons per head is a reasonable amount." Continuing, Mr. Brown says:—"1. The Burn Sewer is much too small, being little more than sufficient for the upland waters west of York-road alone, during heavy rainfall, and since Baltic-street, Whitley-street, and York-road sewers are intended to discharge into it, an additional capacity of 6,000 cubic feet is necessary. 2. A new sewer should be constructed in Whitley-street, from Church-street to Burn-road. 3. New sewers of much increased capacity should be constructed in Baltic-street, Oxford-street, and Cleveland-street. 4. A new and much enlarged sewer should be constructed in York-road, Park-road, Waldon-street, and Hart-road. 5. The Bridge-street and Mainsforth-terrace sewers should be constructed to new levels. 6. The existing sewers in Front-street, Seaton Carew, should be relaid to new levels. 7. The existing secondary sewers constructed prior to 1884 being found in such an unsatisfactory condition in every way, they should be wholly reconstructed on modern lines." The approximate estimate of the cost of the scheme is 70,922*l.* 10s.

NEW DOCK AT BURNTISLAND.—The Burntisland Harbour Board met on the 19th ult., when the business of receiving offers for the construction of a new deep-water dock was before the meeting. The committee's report on the tenders received from the selected contractors recommended that the offer of Sir John Jackson, Westminster, be accepted, and the meeting unanimously adopted the committee's recommendations. The estimate of Messrs. Meik & R. Henderson, engineers, as to the probable cost of the new works was 300,000*l.*, and the tender accepted, it is understood, is between 250,000*l.* and 260,000*l.* The new dock is to have a water area of fully ten acres, and a depth at spring tides of 29 ft. —*Scotsman.*

SEWERAGE SCHEME, CRABB'S CROSS.—The Feckenham Rural District Council have instructed Mr. J. E. Willcox, C.E., of Birmingham, to prepare a scheme of sewerage and sewage disposal for the districts of Crabbs Cross, Hunt End, and portion of The Ridgway within their district.

BRIDGE, BOLTON ABBEY, YORKS.—The contract for the making of the Bardenbeck Bridge and roads has been let to Messrs. Morrison & Mason, contractors, Glasgow, who are executing the works of the Bradford Corporation Waterworks, the conduit of which passes close by. The engineers are Messrs. John Varley, C.E., & Son, Skipton. Being on the route of tourists to Bolton Abbey, it is intended to open the works in time for the Diamond Jubilee.

THE CLAIM AGAINST THE ST. PANCRAS GUARDIANS.—In our report of this case in our issue for the 23rd ult., page 87, the name of Messrs. Kirk & Randall's manager should have been given as Wm. Jas. Renshaw, instead of "Bradshaw."

FOREIGN.

FRANCE.—A Committee has been formed for the erection of a monument to Sainte-Beuve in the Luxembourg garden.——M. Frèmiet is to execute the statue of Jules Simon to be erected on a site to be hearafter selected in Paris. M. Scellier de Gisors will design the pedestal.——The fourth exhibition of the works of French painters in the East will be opened at the Durand Ruel Gallery on the 15th, to remain open till March 13. The exhibition will include this year, besides modern sculpture and painting, a section for Oriental Art, consisting exclusively of Persian miniature paintings, and a retrospective exhibition dedicated to the works of the late Theodore Chassériau, which deal with Oriental subjects.——M. Huet, Inspector-General in the Department of "Ponts et Chaussées," has reached the age of official superannuation, but the difficulty of finding at present any one adequate to take his place has induced the Prefect of the Seine to continue M. Huet in office until the exhibition of 1900.——The jury in the competition opened by the town of Dunkerque for a Préfecture Hôtel have awarded the first premium to M. L. Fortier, architect, of Valenciennes, and the second to M. Mollet, of Lille.——The death is announced of M. Blaquière, architect, of Bordeaux. He was born in that town in 1829, and after having studied architecture under his father, came to Paris to the atelier of Uchard. Subsequently he erected in his native town a number of noteworthy buildings, marked by a special style and refinement of design. Among them may be mentioned the Hôtels (or mansions) Maletta, Calvé, and Lafourcade; the Villa Faust, at Arcachon; and the château of Giversac, in the department of Dordogne. He was a member since 1877 of the Société Centrale, and from 1882 to 1883 was president of the Société des Architectes of Bordeaux, of which he was the founder.——The death is also announced, at the age of eighty, of M. Collin, former manager-in-chief of the Gobelins ateliers, and who sat for twenty years in the Municipal Council of Paris, where he gave most valuable assistance in all questions of artistic improvement, especially in regard to the teaching of drawing. It was owing to his suggestion and his experience that the Fine Arts department of the Paris Municipality was able to preserve and restore its ancient tapestries, a selection from which is now to be seen in the Galliera Museum.

GERMANY.—Particular attention appears to be paid at present to the development of riding-schools, which have become a necessity at Berlin, owing to the frost preventing outdoor riding, which sport is growing more popular from year to year in that city. New riding-schools have lately been built near the Brandenburg Gate and near the Bendlerstrasse, and we now hear of another at Charlottenburg. As is generally the case with the modern German riding-school, stabling is provided on the ground-floor level, whilst the riding-school is some 15 ft. above the pavement, the approach generally being by an easy gradient. In this instance there are two riding-schools, the larger of which measures 150 ft. by about 75 ft., while under it room has been found for ninety-three stalls and eight boxes. The architects are Messrs. Ende & Boeckmann, and the total cost is 35,000*l.*——We regret to record the death of Herr Arnhold Bergstraesser, of Darmstadt—a well-known German architectural publisher—who has been responsible for such large publications as the "Handbook for Architecture," "The Heidelberg Castle," and other important technical works. ——The twenty-fifth anniversary of office of Mr. Zimmermann, City Architect, of Hamburg, has been celebrated with considerable ceremony. Mr. Zimmermann has been responsible for an expenditure of over three millions sterling, more particularly on the numerous school buildings erected at Hamburg, and on the large and many important buildings in connexion with the new free harbour in that city. Mr. Zimmermann is also well known as a frequent visitor to this country, the occasion of his last visit being, we believe, to inspect the new fire stations built in London and the provinces.——From Hamburg we hear of a competition for the best method of heating conservatories, with particular reference to the requirements of the Horticultural Exhibition Committee of that town. A very influential jury will award the premium, the selection of the assessors being from master gardeners and engineers. April 1 is the sending-in day for the designs, the first premium being 50*l.*

AUSTRIA.—At a season when many visitors to the Mediterranean make some sojourn at Abazzia, it is of considerable interest to note that new waterworks will be constructed for this resort, according to the design and under the supervision of Herr Anton Hoefer, whose experience in waterworks for minor townships has been considerable. The promenades at Abazzia are to be lighted by electricity.——The work for the Metropolitan Railway at Vienna has been carried out very energetically during 1896. The official report shows that about equal progress has been made on all sections of the line, both in the levelling of the track and in the new buildings. ——Vienna is to have its first electrical tramway in the course of a few days, according to the system of Engineer Bannak, the principle of which is the installation of contact studs between the rails at a distance of some four or five mètres from one another. This prevents either the necessity of a third rail being laid in between the two principal rails or wires being carried overhead.——The architects of Vienna propose giving a large ball under the patronage of Prince Otto. Herr Oberbaurath Wagner has taken the matter in hand.——Professor Neumann and the Cathedral architect, Herr Julius Hermann, have been appointed members of the special Government Commission on the Historical Monuments of Austria.

MR. RHODES'S SOUTH AFRICAN RESIDENCE.—One of the last acts of Mr. Rhodes before leaving Cape Town for England was to instruct Mr. Herbert Baker, architect, to rebuild his house which was lately destroyed by fire. The original design will be closely followed, except that Dutch tiles will be used for the roofing in place of the thatch in which, in the former building, the fire is supposed to have originated. The bronze bas relief of "The Landing of Van Riebeck," placed over the entrance to the house, was fortunately preserved unharmed, together with many of the most important works of art within.

MISCELLANEOUS.

THE INCORPORATION OF WESTMINSTER AND OF KENSINGTON.—Local committees have been formed to present petitions to her Majesty in Council in respect of the proposed incorporation of Westminster and of Kensington, under the Municipal Corporations Act, 1882. The united parishes of St. Margaret and St. John, Westminster, with the hamlet of Knightsbridge—population 55,500, rateable value 870,000*l.*—are at present governed by a Vestry which was reconstituted in 1888, upon the dissolution of the Local Board of Works appointed in 1855. The Vestry, as such, claim to be the most ancient of their kind in London, carrying back their record for the civil parish to more than 350 years. Westminster, as another name for Thorney, is cited in Offa's (reputed) charter of A.D. 785; the boundaries of the manor which King Edgar gave the Abbey by a generally accepted charter included parishes of which Langton deprived it in 1222, namely, St. Giles-in-the-Fields, St. Andrew, Holborn (in part), St. Bride, St. Clement Danes, St. Mary-le-Strand (Holy Innocents), and St. Dunstan-in-the West. In 1535 it was further reduced for Henry VIII.'s new parish of St. Martin-in-the-Fields; out of the latter were subsequently taken St. Paul, Covent Garden, St. John the Evangelist, St. Anne, Soho, St. James, Piccadilly, and St. George, Hanover-square parishes. The detached portion of St. Margaret's contains nearly all Kensington Gardens, with the Palace and grounds (*olim* Neate Manor-house), Kensington Gore, and a slip of Hyde Park—these belonging to Eia, the three manors of Hyde, Neate, and Ebury, which Geoffrey de Magnavilla bestowed upon the Abbey *temp.* William I. In Elizabeth's reign the civil government of Westminster was settled in lay hands, yet a survival of earlier times is found in the appointments of High Bailiff and High Steward—the latter by the Dean. The first High Steward was William Cecil, Lord Burleigh, nominated by Dean Goodman. In the muniment-room at the town-hall are records of parochial matters beginning with the year 1464. In 1893 St. Mary Abbot's, Kensington, parish contained 24,139 rated householders, the rateable annual value being 1,164,941*l.* In Domesday Survey the manor of Chenesitun appears as being held by Aubrey de Vere of the Bishop of Coutances, Aubrey, ancestor of the de Veres, Earls of Oxford, gave a large part of his holding, including the church, to the abbots of Abingdon; the remainder continued in the de Veres until 1526, and then passed through female descendants of the last male of that house to the families of Neville, Cornwallis, and Wingfield. In Edward III.'s reign it was valued at 20*l.* 5s. 6d., arising out of a messuage with dove-house, one windmill, 360 acres of arable land, 24 acres of pasture, and 140 acres of wood, rents of tenants, &c., and is now represented, it seems, by Holland House, built, 1607 (and reputedly by Thorpe) for Sir Walter Cope, whose daughter Isabel married Henry Rich, advanced Earl of Holland in 1624. The wings are later. Thorpe's drawing, at the Soane Museum, is inscribed, "Sir Walter Coap pfected p me.—J. T."

A SHIP LIFT ON THE DORTMUND CANAL.—We have frequently referred to the extensive canal works being carried out in Prussia in connexion with a systematic programme of water-way inter-communication brought forward by the Government. The canals, as such, cannot be classed among works of considerable technical interest, but a number of the docks, locks, &c., call for comment. We would particularly call attention to a new ship-lift on the new canal between Dortmund and the Ems Harbours, which practically comprises an enormous tank into which the ships are first floated, the tank being then raised by a system of diving bells. The length of the tank is 70 mètres, and its width 8·6 mètres; it allows for a water-level of 2·5 mètres. The tank is supported by five wrought-iron columns, and these in turn rest on five diving bells or buoys, which float in large reservoirs, and can be raised or lowered according to the amount of water let into the reservoir. The diameter of each reservoir is about 8 mètres, or 25 ft.; boats of 600 tons capacity can be raised in the tank. The ship-lift is certainly one of the most interesting pieces of modern construction on the Continent. The patentees and constructors are Messrs. Haniel & Lueg, of Dusseldorff.

CITY COMMISSION OF SEWERS.—On the 26th ult. a meeting of the City Commission of Sewers was held at Guildhall. On the motion of Mr. Alderman Treloar a cordial vote of thanks was accorded to Mr. Benjamin Turner, the chairman, for his services in that capacity during the year. Mr. Turner, in reply, referred to the improvements carried out or projected during the year by the Commission, among these the most important was the intended widening of the western end of Cheapside, which would cost 160,000*l.* Other improvements at that part of the City would be the rounding off of the Post Office end of Newgate-street, and a corresponding advantage on the other side. The widening of Fleet-street between Salisbury-court and Ludgate-circus would be of vast public benefit, as would be the improvements in Thames-street. The Finance and Improvement Committee reported that the London County Council refused to contribute to the proposed widening of the eastern end of Widegate-street. It was resolved to ask them to reconsider the decision. It was stated that the vacant land in Widegate-street had been sold for nearly 30,000*l.*

MEDIÆVAL ARCHITECTURE.—On the 25th ult., in the principal hall of the Nottingham Mechanics' Institution, Mr. Arnold Mitchell delivered a lecture on "English Architecture of the Middle Ages." In the course of his remarks, Mr. Mitchell, referring to Durham Cathedral, said that the edifice was the most beautifully situated of all English cathedrals, only rivalled, not equalled, by Lincoln. Its main feature was what was seen in all the great cathedrals—three large towers. Mr. Mitchell then proceeded to show how these towers gave external expression to the structural arrangement of the plan. In referring to the great space which is devoted to the clergy, he said that few of the cathedral churches were built originally as cathedrals (Lincoln was an exception). They were only lesser portions of a great ecclesiastical foundation. They were monastic churches, and this was the reason why they had the extraordinary elongation of the eastern limb of the building. Returning to the subject of the towers, the lecturer explained that they also gave the required stability and strength to the long line of arches inside. The towers, he said, further, were intended to support spires, but Lichfield was the only instance in which this idea had been carried out, and in which the spires were still standing. The lecturer devoted some remarks to the lighting of the buildings from the top, which was the secret of obtaining entirely satisfactory light. In all periods of architecture this fact had been recognised. The Pantheon at Rome was the oldest building, he supposed, still standing, and in ordinary daily use. This building was without a single window, being lighted by a great hole, 30 ft. in diameter, in the centre of the dome. How barbarous and how primitive, they might say. Notwithstanding, there was not a single building in existence more beautifully lighted than was the Pantheon at Rome. Mr. Mitchell found much to relate in reference to the architectural beauties of Lincoln Cathedral, saying that Lincoln could teach them all they could desire to know of its beautiful period of architecture. It was divided into three groups, and extended over about one hundred years. He traced the history of the beautifying of the stonework by the early builders, and explained the manner in which they first began to enrich their ornamentation, exhibiting on the screen an example from Chichester to show the very early methods, and subsequently introducing photographs from Rochester, Peterborough, Lincoln, &c. Mr. Mitchell concluded with details of the west front of Peterborough Cathedral, strenuously advocating the restoration by the Dean and Chapter; he carried the large audience entirely with him in support of their scheme. The lecture was illustrated by lantern views.

THE PATENT OFFICE.—After a service extending over forty-seven years, Sir Henry Reader Lack retires this month as Comptroller-General of the Patent Office. When chief of the Statistical Department, Board of Trade, he was placed in charge of the Trade Marks Registry, opened on January 1, 1876. In March of that year he succeeded the late Bennet Woodcroft, F.R.S.,* as Clerk to the Commissioners of Patents for Inventions. Upon the abolition of the Commissioners, under Mr. Chamberlain's Act of 1883, the Patent Office, with the Registry of Trade Marks and Designs, was reconstituted as a department of the Board of Trade, a large staff of expert examiners of specifications was appointed, and Sir Henry Reader Lack was made Comptroller-General. We understand that the Comptroller (knighted in June, 1891) will be presented by the members of his staff with what should prove a highly gratifying token of their regard and appreciation of his public services, and that to the appointment is attached a maximum salary of 1,500*l.*

BARRY MASTER BUILDERS' ASSOCIATION.—A meeting of the master builders of the Barry district was held at Barry Docks recently, Mr. Geo. Rutter, Barry, occupying the chair, when it was unanimously resolved to form a Master Builders' Association, with the following officers:—President, Mr. G.

* *Obiit.* February, 1879. Founder of the Patent Office Museum and Free Library; formerly a consulting engineer, and Professor of Machinery, University College.

Rutter; vice-President, Mr. C. H. Hirst; secretary, Mr. E. E. Bryant, 11, Glamorgan-street, Barry; treasurer, Mr. E. Jones; committee, Messrs. S. Hopkins, H. Lloyd, W. Britton, N. Thomas, E. Phillips, J. A. Manaton, Jonathan Lewis, J. Prout, and E. J. Ince. The Chairman reported that a draft code of working rules had been received from the local Carpenters' Association, and it was decided to consider the same at the next meeting.

BRISTOL MASTER BUILDERS' ASSOCIATION.—The annual meeting of this Association was held on the 28th ult., at the Guildhall, Small-street, under the presidency of Mr. C. A. Hayes. The Secretary (Mr. Henry J. Spear) presented the annual report, which stated that the past year had been a fairly active one, business being active in most of the branches of the building trade, and the work of the Association had probably been of a more attractive character than in the preceding year. Several discussions had taken place during the year with reference to priced bills of quantities, and the following resolution was adopted by a large majority:—"That, in the opinion of the members of this Association, the practice of depositing priced bills of quantities with architects at the delivery of the tender is both unfair and inconvenient to the contractor, and should be discontinued by the members from November 5 last." This resolution was duly brought under the notice of each member of the Association, with an intimation that should they be invited to tender for a job where it was stipulated for the quantities to be sent in, they were to inform the Secretary, and the Committee would at once take up the matter, and thus avoid any friction arising between the member and the architect, and should the contract be accepted, of course the member could then let the architect have a copy of the priced quantities if required. Reasons having been assigned by some of the members that the resolutions passed upon May 27, 1891, were not considered still in force, the Secretary was thereupon instructed to call the attention of the whole of the members to the same, and to enclose a copy of the form of tender, together with the resolutions referred to, as follow:—"That, on and after the 1st of July next, the enclosed form of tender will be adopted by this Association, and that the members of this Association conform to such form for all work in this city and district." "That, from this date, the members of this Association pledge themselves not to sign any contract in which any professional man employed by the principal is the sole arbitrator." During the year there had been two plasterers', one bricklayers', and one painters' disputes, but it was satisfactory to state that all had been of a very trivial nature, and that though in most instances boards of conciliation had met and discussed the points at variance between the employers and employed, yet they all had been settled in a most amicable manner, and with great despatch. Mr. C. A. Hayes moved, and Mr. A. Krauss seconded, the adoption of the report, which was carried *nem. con.* The treasurer (Mr. George Humphreys) presented the audited accounts of the Association, which showed a credit balance of over 50*l.* The President moved and Mr. George Humphreys seconded, and it was resolved by acclamation, that Mr. August Krauss be elected President of the Association for the current year. Upon the motion of Mr. E. Walters, seconded by Mr. Geo. Wilkins, it was resolved unanimously that Mr. William Church be elected Vice-President for the ensuing twelve months. The re-election of Mr. George Humphreys as treasurer to the Association was unanimously adopted upon the motion of Mr. Frank Cowlin, seconded by Mr. A. S. Scull. The election of the committee was then proceeded with, and at the close of the proceedings Mr. A. Krauss, Mr. C. A. Hayes, and Mr. William Church gave a report of the proceedings in connexion with the National Association at Blackburn recently. A vote of thanks was accorded to the retiring President (Mr. C. A. Hayes) for his valuable services during the past year.

INDUSTRIAL AND TRADES EXHIBITION, LEAMINGTON.—An eleven days' Industrial and Trades Exhibition was opened at the Winter Hall, Leamington, on the 2nd inst., by the Mayor.

LEEDS BUILDERS' EXCHANGE CLUB.—The annual dinner of the Leeds Builders' Exchange Club was held in Fairburn's City Restaurant on the 29th ult. Mr. G. Burnell presided over the gathering of about 80 members and friends. "The Mayor and City Council, and the Chairman of the Highways Committee," was proposed by Mr. J. Speight. Mr. W. H. Cliff proposed "The Chairman and Deputy-Chairman of the Building Clauses Committee and Officials." Mr. Batley, Chairman of the Committee, responded. Mr. Carter, Mr. D. Hainsworth, and Mr. W. Towers also responded. Mr. Hainsworth said that anyone who had seen the slums of Leeds would agree that it would have been a blessing if the Building By-laws, much as they were criticised, had been in force 100 years ago. He referred with pleasure to the settlement of the strike in the building trade, adding that, in spite of it, more plans had been passed last year than in any previous one. Never at any time had the work of the builders in the city been done better than it was at the present time. "The Visitors" was proposed by Mr. E. Stead, and responded to by Mr. Freeman and Mr. Swallow. "The Leeds Builders' Exchange Club" was given by Mr. Dews, and Mr. Puffitt responded. After dinner, a smoking concert was held in the club's rooms.

BUILDERS' ASSOCIATION DINNER AT HANLEY.—The annual dinner of the Potteries, Newcastle, and Leek branch of the National Builders' Association took place at the "Saracen's Head" Hotel, Hanley, recently. Mr. J. Gallimore (Newcastle) presided, and the vice-chairs were occupied by Mr. W. Grant (Burslem) and Mr. L. Price (Stoke) After dinner the loyal toasts were proposed. Mr. W. Cartlidge (Burslem), in submitting the toast of "Success to the Building Trade and the Builders' Association," said, from the present outlook success seemed a long way off. Success in the building trade depended upon the treatment which they experienced, and they were told by their secretary that according to a notice received from the operatives they were to be hampered by delegates from the trades union going to a job, and even to a builder's yard, to make inquiries at various stages. This would sure to entail a loss upon the builder, because the moment a delegate appeared, men put down their tools and wanted to know what he was after. If the delegates were going about in that way to examine men's tickets, the employers would suffer, by reason of work being hindered. Then again, if a builder was to be successful he must have control over his own business, and regulate the number of apprentices according to his requirements. The next thing which he wished to mention was the new Truck Act, which he recommended every builder to carefully examine and consider: it should be brought before the National Federation of Great Britain. Mr. J. Bowden (Burslem), the secretary, in responding, said it was their duty to be united and to meet the requirements of the workpeople in a fair and reasonable manner. Trades unions were an institution, and they had to be dealt with, and the only way to deal with them was for employers to meet workmen in harmony and strength. It would be better for the masters if every workman belonged to a trades union. One source of weakness was that many workmen did not belong to trades unions. If every man was in a union the instructions to delegates would be final. With two or three exceptions all the builders of the district were in the Association.—Mr. Cooke, one of the auditors, having presented a financial statement, the President said Mr. George Ellis, Mr. Bowden, and himself were the only three present who were members of the old Builders' Association. During the seven years of the present organisation Mr. Ellis had been their hon. secretary. How well he had done the work they all knew. The members of the Association wished to mark their sense of Mr. Ellis's good qualities by presenting him with a testimonial on his retirement. He (the President) then presented to Mr. Ellis, on behalf of the subscribers, an illuminated address, bound, and containing ninety signatures; also a purse of money. Mr. Ellis briefly replied. Mr. J. Bagnall (Tunstall) proposed the toast of "The President and Officers." Mr. Gallimore, in reply, strongly urged them to band themselves together for their own well-being as tradesmen. Mr. L. Price and Mr. Chas. Smith (Tunstall) also responded. The toasts of "The Visitors," for whom Mr. E. J. Hammersley responded, "The Press," and "The President" followed.

CAPITAL AND LABOUR.

THE COVENTRY WORKMEN'S DEMANDS: INCREASE GRANTED.—As was reported in these columns recently, at the end of last year applications were received by the Coventry Master Builders' Association from every branch of the building trade, except the painters, for an increase of wages; and in several cases also the employers were asked to assent to important alterations to the trade rules. Carpenters, who were receiving 8d. per hour, asked for a "minimum wage" of 9d.—the masters could give more if they liked; bricklayers, plasterers, and masons applied for an increase from 8d. to 9d., and mason fixers from 8½d. to 9½d. Bricklayers' labourers, who were getting 5½d., requested an advance of ½d., and plasterers' labourers and scaffolders desired 1d. increase, from 5½d. to 6½d. The Masters' Association have now considered the applications, which affect 5,000 men, and have decided to grant the carpenters, bricklayers, plasterers, and masons a fixed increase of ½d., and the various labourers ¼d. per hour, and to meet them part of the way in reference to the proposal to introduce new rules. The replies of the trade societies have yet to be received. It is possible they may not be satisfied with the concessions; if not, the matters will be settled by arbitration. With regard to the alteration of rules, the carpenters and joiners, bricklayers, and masons each asked for a reduction of working hours, viz., carpenters 2 hours, bricklayers 3½ hours, and masons 2½ hours. To this the masters reply that they will consent to any reasonable alteration, provided that there shall be uniformity in the working hours in all branches of the trade. With regard to the bricklayers alone, the masters agree to the omission of the following rule, which has hitherto prevailed:—"Neither masters nor men shall interfere with any man on account of his being a society or non-society man. The society men pledge themselves not to annoy non-society men, and the masters pledge themselves not to annoy or allow any annoyance to society men." As to the question of apprenticeship, the masters assent to the indentures being extended from three to at least five years. They also agree that overtime shall count from 5 30 p.m. instead of 8 p.m.

WAGES IN THE OLDHAM BUILDING TRADE.—The Builders' Association of Oldham and district has received notices for advances in wages, &c., as follows: (1) The operative bricklayers have given three months' notice for an advance in wages from 9d. to 10d. per hour, such notice to expire on April 30, 1897. (2) The operative plasterers have given six months' notice for an advance in wages from 8½d. to 9d. per hour, and an alteration of existing rules as to overtime, &c., such notice to expire on July 18, 1897.—*Manchester Courier.*

LEGAL.

AN ARCHITECT AND HIS ARTICLED PUPIL:

ACTION FOR DAMAGES.

THE case of Sadgrove *v.* Coad came before Mr. Justice Charles, sitting without a jury, in the Queen's Bench Division on the 14th ult., it being an action brought by Mr. Edwin James Sadgrove, an architect and surveyor, of Surrey-street, Strand, to recover from the defendant, Mr. John Coad, of Tunbridge Wells, damages for the alleged breach of certain covenants contained in an apprenticeship indenture dated October 23, 1894, entered into by Mr. Richard Henry Coad, deceased, the defendant being sued as the executor of Mr. R. H. Coad.

The statement of claim alleged that the indenture in question contained a covenant that Mr. Percy Arthur Coad, the son of Mr. R. H. Coad, should faithfully and diligently serve the plaintiff as clerk and articled pupil during the term of three years, and that Percy Arthur Coad would not absent himself from such service without the plaintiff's consent; that on September 15, 1896, Percy Arthur Coad had unlawfully absented himself without the plaintiff's consent, and had ever since continued to absent himself, and refused to serve the plaintiff. The plaintiff alleged that inasmuch as his pupil had become of value to him on September 15, 1896, he had been injured by his continued absence, for which he claimed damages.

The defence pleaded was that it was a term of the indenture that the plaintiff should to the utmost of his skill and knowledge teach and instruct, or cause to be taught and instructed, P. A. Coad in the profession of an architect and surveyor in consideration of a premium of 50*l.*, and that the plaintiff had neglected and refused to do so, and had prevented him from learning his profession by employing him on other work than that agreed upon, and whereby he had failed to obtain the benefit of the agreement. The defendant counter-claimed for the return of the premium and for damages.

Mr. Kemp, Q.C., and Mr. J. C. Earle appeared as counsel for the plaintiff; and Mr. McCall, Q.C., and Mr. G. M. Cohen for the defendant.

The plaintiff in his evidence-in-chief stated that Mr. P. A. Coad had become useful to him in his business, and that to fill his place would cost him 250*l.* per annum for a qualified man.

Mr. McCall cross-examined with a view to showing that the witness had constantly sent Coad on errands of a personal character which had nothing to do with his profession. The witness further stated that Coad did plenty of work as an architect, and that he was to be secretary and clerk of works to a company he had promoted at Dulwich, where he would have had a splendid opportunity of gaining experience in his profession. Coad was to receive a salary of 100*l.* a year from the company, but out of that he was to pay an assistant 1*l.* a week.

Re-examined:

Coad had never made any objection to going for little errands for him.

Mr. Thompson, an architect and surveyor, and an Associate of the Surveyor's Institution, gave evidence as to frequently assisting Mr. Sadgrove in his business. So far as he saw Coad was instructed in the work of the office, and he himself had instructed Coad. He did not remember Coad making any complaint about not being instructed.

Cross-examined:

He had his own practice to attend to. Mr. Sadgrove assisted him sometimes and sometimes he assisted Mr. Sadgrove. He would not be the person to receive complaints from Coad.

Mr. Harry Watkins, examined, said that he entered the plaintiff's employment in 1893, and became articled to him in July, 1894, and was in the office the whole time Coad was there. Coad performed the same duties as himself. Quantity surveying was witness's forte, and he went into that more than architecture. Coad was instructed from time to time by the plaintiff. When the plaintiff was away qualified assistants were left in charge. Coad had complained to him about being sent on errands by the plaintiff, but that occurred very seldom. At the time Coad left he was able to assist in the work of the office. Coad had made progress.

Cross-examined: Coad was of use to the plaintiff at quantity surveying. He got on better at quantity surveying than Coad, as he kept almost exclusively

at quantity surveying. Coad did complain to him that he was put to do work that an office boy should have done. Coad had complained to him of dusting the plaintiff's office.

Re-examined: The housekeeper employed there sometimes did not dust properly, and he and the other gentlemen used to dust sometimes to save the trouble of sending for the housekeeper. Coad very seldom complained to him about going errands for Mr. Sadgrove.

Mr. King gave evidence as to entering the service of the plaintiff in February, 1896. During the time he was there Coad was treated as an articled pupil in the same way as Mr. Watkins. Witness entered Mr. Sadgrove's service as an improver, to gain experience. He had previously served his articles. Mr. Sadgrove had more work than could be done during office hours, and he (witness) did many hours' overtime work for him. Coad had made drawings as an architect, and had also been set on quantities. Coad most certainly had an opportunity of learning his business if he had liked to do so.

Cross-examined: He went to the plaintiff as an improver at a salary of 2*l.* 2s. a month, with extra remuneration for overtime work.

For the defence Mr. P. A. Coad, called and examined, said that when he first went to the plaintiff's office no boy was kept to do the ordinary work. From time to time he used to dust the plaintiff's office in conjunction with Watkins, the other articled pupil. He did that on many occasions.

His Lordship remarked that the witness had kept a very minute diary, and it was curious to find that he did not say much in it about the dusting.

The Witness: Because I did not put it down.

His Lordship: It does not matter a twopenny piece whether the witness did or did not dust the plaintiff's papers.

Examination continued:

As far as quantity surveying was concerned Mr. Sadgrove had instructed him in the way to take abstracts and to square dimensions, but any one could learn how to do that in about five minutes. The plaintiff also taught him how to keep the papers in order and to keep the cash accounts of the office. He had been on several personal errands for the plaintiff from time to time. He had been sent by the plaintiff to the tobacconist, and also with trousers and coats to the tailor, and boots to the cobbler to be mended. The sum of 540*l.* had been put in the Dulwich Company by his brother and 10*l.* by himself. The plaintiff had never expressed satisfaction at any work witness had ever done, and he had received no encouragement. He was absolutely of no use in taking out quantities.

Cross-examined:—

He had never written to the plaintiff making the complaint he had made then. The plantiff had complained to him of the way he had done his work sometimes. The reason he had remained with the plaintiff for two years was because he did not wish to create any unpleasantness between the plaintiff and his father. Since his father's death he had been studying architecture privately. He came into an annuity a few days before he threw up his articles. He had not earned any money since he threw up his articles.

Mr. John Coad, the defendant and the uncle of Mr. P. A. Coad, gave evidence as to a conversation he alleged he had had with the plaintiff, who then told him that he (the plaintiff) had advised young Coad to get out of it, as he was of no use in the work or adapted for the profession.

Cross-examined: His nephew was a moderately intellectual young man, but not at his profession. He did not think that his nephew was capable of taking out quantities.

At the conclusion of the defendant's case, Mr. McCall addressed his Lordship in mitigation of damages, stating that he could not now deny, having heard the evidence, that there had been a breach of the agreement with the plaintiff.

Mr. Kemp having replied,

His Lordship, in giving judgment, said that having heard the evidence he had no doubt whatever that the plaintiff had done his duty by the young man in question. The plaintiff did a large business and gave young Coad ample opportunity of seeing that business. Further, the plaintiff had instructed him, as far as he could, himself, and when not able to instruct himself there were able assistants in the office who could give instruction to him. His opinion was that at the close of the second year of his articles young Coad was a great deal of use to the plaintiff, although he (Coad) had invited him to believe he was next door to a blockhead and of no use at all. He felt that the young man had given an unreliable account of his own capacities, as he had no doubt that he had learned a great deal in those two years. There was proof of that, because he could not believe that a man like the plaintiff, who was working up a company to develop the Dulwich Estate, would propose to put the youth in the responsible position of secretary and clerk of works at a salary of 100*l.* a year if he was the incompetent person he (Coad) said he was. On the other hand, he was of opinion that the plaintiff had greatly exaggerated the damage he had suffered. There was no evidence to warrant the assertion that Coad's services were worth 250*l.* a year to him. He thought that the proper thing to do would be to give judgment for the plaintiff for 55*l.* on the claim and also judgment for the plaintiff on the counter-claim, with costs.

Judgment accordingly.

THE COUNTY COUNCIL AND THE BUILDING ACTS.

AT the North London Police-court on the 29th ult., Mr. William Hickling, of Stoke Newington, and Mr. A. T. Frampton, of Bournemouth, were summoned before Mr. d'Eyncourt for paving rates in respect to a series of buildings in Prince George-road, Stoke Newington. The sum claimed amounted to 136*l.*, and Mr. Webb, who appeared for the Vestry, asked that orders should be made for the payment of the amount forthwith.

The rate had been made in respect to the buildings on a piece of land 120 ft. wide by only 20 ft. deep. The buildings have been the subject of much litigation, the County Council alleging that the buildings, which had been erected at great expense, stood out 7 ft. beyond the building line. Nearly two years ago the High Court decided in favour of the County Council, and the case being remitted to this court, the magistrate (Mr. Lane) made an order for 7 ft. of the whole length (120 ft. of the building) to be demolished. On the 29th ult., as the owner had not complied with the order, the Council proceeded to erect a hoarding round the buildings preparatory to the 7 ft. of the whole length being demolished.

Mr. Hickling said that this action on the part of the Council altered his position with regard to the paving rates. His frontage was being altered into a flankage, and he objected to pay frontage rates for a flankage such as the land would be when the Council had demolished his building—a receptacle for all the dead cats and rubbish of the neighbourhood.

Mr. d'Eyncourt said that the position was clearly altered. He would adjourn the case for twelve weeks to see whether the Council did pull the building down.—*Morning Advertiser.*

THE LONDON BUILDING ACT.

BEFORE the Lord Mayor, at the Mansion House, on the 12th ult., C. F. Kealey, a builder in High-street, Kensington, was summoned under the London Building Act, 1894, for failing to comply with a notice of irregularity requiring certain omissions to be remedied in the building of premises at 60, Cheapside.

Mr. Hugh McLachlan, the District Surveyor, who appeared in support of the complaint, said the builder was willing to do the work required, but the architect and owner declined. The question was whether certain dormer windows on the roof of the premises which were constructed of wood covered with lead were combustible within the meaning of the Act, because, if so, the party walls must be made 12 in. higher and wider on each side of them to comply with the Act, and that was what the notice served on the defendant required to be done.

Mr. Daldy, solicitor, who appeared for the owner of the premises, contended that the dormers being covered with lead were not combustible, although the lead might be melted by fire. There was only a small proportion of wood, and his view was that lead and glass were not combustible.

The Chief Clerk (Mr. Douglas) said the list of fire-resisting materials enumerated in the Act did not include lead.

The Lord Mayor, observing that it was a pity the Act was not more explicit, directed the notice to be complied with within a month, and granted 13s. costs.—*Morning Advertiser.*

MEETINGS.

FRIDAY, FEBRUARY 5.

Architectural Association. — Mr. A. S. Flower on "An Unwritten Chapter of English Architectural History. 7.30 p.m.

Royal Institution.—Professor Jagadis Chundra Bose, M.A., D.Sc., on "The Polarisation of the Electric Ray." 9 p.m.

Institution of Mechanical Engineers.—Annual General Meeting (concluded). 7.30 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary meeting of the members. 8 p.m.

SATURDAY, FEBRUARY 6.

Sanitary Inspectors' Association (Carpenters' Hall).—6 p.m

MONDAY, FEBRUARY 8.

Royal Academy of Arts.—Fifth Lecture on "The Advancement of Architecture, Chiefly in Relation to Gothic Architecture," by Professor Aitchison, A.R.A. 8 p.m.

London Institution.—Mr. Cyril J. Davenport, F.S.A., on "Decorative Bookbinding from Mediæval Times," illustrated. 5 p.m.

Surveyors' Institution.—Mr. J. W. Willis Bund on "Allotments and Small Holdings." 8 p.m.

Society of Arts (Cantor Lectures).—Mr. William Burton, F.C.S., on "Material and Design in Pottery," IV. 8 p.m.

Clerks of Works' Association. — Fourteenth Annual Dinner, Holborn Restaurant (The King's Hall). The chair to be taken by Mr. Beresford Pite. 6-30 p.m.

TUESDAY, FEBRUARY 9.

Society of Arts (Applied Art Section).—Mr George M'Culloch on "Lithography as a Mode of Artistic Expression." 8 p.m.

Institution of Civil Engineers.—Mr. H. F. Donaldson on "Cold Storage at the London and India Docks." 8 p.m.

Carlisle Architectural, Engineering, and Surveying Society.—Mr. G. Slack on "Warming of Buildings.'

WEDNESDAY, FEBRUARY 10.

Sanitary Institute.—Dr. F. J. Waldo on "Sanitary Supervision of Shelters for the Homeless." 8 p.m.

Society of Arts.—8 p.m.

Edinburgh Architectural Association.—Mr. Alexander Drew, C.E., on "The Practical Designing of Iron and Steel Roofing," IV. 8 p.m.

THURSDAY, FEBRUARY 11.

Royal Academy of Arts.—Sixth Lecture on "The Advancement of Architecture, Chiefly in Relation to Gothic Architecture," by Professor Aitchison, A.R.A. 8 p.m.

Society of Antiquaries.—8.30 p.m.

Royal Institution.—Mr. J. W. Gregory, on "The Problems of Arctic Geology." I. 3 p.m.

Society for the Encouragement of the Fine Arts.—Mr. James Orrock, R.I., on "William Müller." 8 p.m.

Institution of Electrical Engineers.—Continuation of discussion on Mr. F. T. Hollins' paper on "Electric Interlocking the Block and Mechanical Signals on Railways." 8 p.m.

Society of Arts (Indian Section, Imperial Institute).—Professor Jagadis Chundra Bose (of Calcutta), D.Sc., on "The Progress of Science Teaching in India." 4.30 p.m.

FRIDAY, FEBRUARY 12.

Institution of Junior Engineers (Westminster Palace Hotel).—Paper on "The Construction of High-class Bridge and Girder Work," by Mr. J. A. Macpherson. 8 p.m.

Royal Institution.—Professor John Milne, F.R.S., on "Recent Advances in Seismology." 9 p.m.

Institution of Civil Engineers (Students' Meeting).—Mr. H. W. Barker on "Cooling Reservoirs for Condensing Engines." 8 p.m.

SATURDAY, FEBRUARY 13.

London and Provincial Builders' Foremen's Association.—Annual Dinner, Holborn Restaurant. 7 p.m.

Edinburgh Architectural Association. — Visit to Broughton School.

RECENT PATENTS:

ABSTRACTS OF SPECIFICATIONS.

163.—DRAIN TRAP: *J. W. Mearns.*—This invention consists in a trap formed of one piece of stoneware which inventor claims is self cleansing. It is not so deep as other traps, though providing sufficient water-seal; flow of matter and water through trap is unbroken, and it can be fixed to existing drains without reducing the gradient.

353.—PREVENTING FROST FROM BURSTING PIPES: *J. G. Jones.*—In order to efficiently empty pipes from cisterns when stop-cock is turned off and draw-cock is turned on, inventor forms an air channel in the outer suface of, and between the two openings in the plug of the stop-cock, and extending from the top of the plug (and consequently opening into the air) towards, but not reaching, the bottom of the plug. A similar air channel may be used in the spindle of screw-down tap.

2,223.—CEMENT OR ARTIFICIAL STONE: *F. Turner.*—Invention relates to a novel compound, composed of powdered limestone and powdered waste slate, and powdered stone or stone chippings, in suitable proportions, intimately mixed with fresh or salt water. The slip or slurry, if for cement, is spread upon layers of coke in a kiln to the desired height, for the water or moisture to be absorbed by the coke, and be rapidly dried thereby. The coke becomes slightly impregnated with limestone and the result is a better cement.

20,665.—WINDOW AND DOOR FASTENER: *A. R. Eungblut and Another.*—Invention consists in a modification of the brass pivoted arm-catch at present in ordinary use for sash windows, &c. Inventors form a projection inside the brass plate which holds the catch (that on lower sash), and a corresponding recess in plate which bears arm (that on upper sash), with the result that any interstice between the meeting bars of sashes is bridged over by this projection, and the blade of a knife, &c., inserted between could not force back the arm which fastens the window.

24,242.—ARTIFICAL STONE: *A. Cléry.* — Invention consists in the preparation of a more or less plastic, strong mass, suitable for various purposes. The formulæ are:—*Solid Mixtures*—(1) Zinc oxide, 33 per cent.; pulverised sandstone or freestone, 67 per cent. This is used for restoring weathered or decayed stone, and for mouldings, vases, statues, &c. (2) Zinc oxide, 30 per cent.; pulverised Portland stone, 35 per cent.; sand, 35 per cent. For lining basements, vaults, cisterns, &c. (3) Pulverised marble, 50 per cent.; silver sand, 20 per cent.; zinc oxide, 30 per cent. For interior walls, cornices, &c. (4) Crushed granite, 70 per cent.; zinc oxide, 30 per cent. For pavements, steps, landings, &c. *Liquid Mixtures*—Muriatic acid, 65 per cent.; zinc, 35 per cent. (or thereabouts). For forming solids into paste.

26,145.—WATER AND LIKE TAPS: *R. Bell ana Another.*—Inventors form an annular groove around a conical plug or tap, which, when in proper position relative to neck and nozzle of tap, permits water to flow around it and out. When screwed down, however, this groove descends below the passage of tap, and only the upper solid part of plug comes there, closing up the channel. Various modifications are specified, and the invention is applicable to all draw-off taps, whether for water or other liquids.

NEW APPLICATIONS FOR LETTERS PATENT.

JANUARY 18.—1,289, J. Coulthurst, Joining Sanitary Pipes.—1,299, C. Erlinghagen, Sheet Iron Corrugated Roofings.—1,322, Tonks, Limited, and I. Whiting, Spring Hinges and Door Springs.—1,345, J. Thomason and others, Dies for Brick-making Machines.

JANUARY 19.—1,384, W. Goodman & Co., Soar Sockets of pipes for Sewerage, &c.—1,414, J. Richardson, Moulds for Brick-making Machinery.—1,432, A. Boult, Decoration of Glass Tiles, Bricks, &c.—1,453, P. Tommarchi, Setting the Teeth of Saws.—1,454, F. Dossogne, Closing Doors Opening Both Ways—1,507, L. Schlentheim, Hearth Stones and Curbs.

JANUARY 20.—1,514, G. Fuhrer, Wall Staples.—1,525, A. Blacker, Heating and Ventilating Rooms, &c.—1,530, W. Allen, Flushing Drains, Sewers, Water-closets, &c.—1,544, J. Drummond, Securing Plate and Sheet Glass to Walls, Ceilings, Bricks, &c.—1,578, E. Kirchner, Horizontal Band-sawing Machines.

COMPETITIONS, CONTRACTS, AND PUBLIC APPOINTMENTS.

COMPETITIONS.

Nature of Work.	By whom Advertised.	Premiums.	Designs to be delivered.
*New Town Hall	Enniskillen Corp.	50*l.* First, 20*l.* second, and 10*l.* Third	Mar. 20
*New States Assembly Hall, &c Guernsey	The States of Guernsey	100*l.* and 50*l.*	April 17

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
*Schools, Bath	.....	C. B. Oliver, Alfred-street, Bath	Feb 9
*Various Materials	County Borough of West Ham	Lewis Angell, Town Hall, Stratford, E.	do.
*Drainage Works	Willesden D.C.	O. C. Robson, Office, Dyne-road, Kilburn, N.W.	do.
*Works and Materials	do.	do.	do.
*Alterations Post Office, Ely	Com. of H. M. Works	Postmaster	do.
Hotel and stabling, Felixstowe	Tollemache, Lim.	J. S. Corder, Wimborne House, Ipswich	do.
*Articles, Services, and Materials	Battersea Vestry	J. T. Pilditch, Municipal-bldgs, Lavender Hill, S.W.	Feb. 10
Road Works, Park-avenue, &c.	Barnsley T.C.	J. H. Taylor, C.E. Boro' Surv.	do.
Additions to Chapel, Patrick-street, Cork	Trustees	R. Walker, Archt. 17, South Mall, Cork	do.
Kerbing and Channelling, Romilly-road, &c.	Cardiff Corporation	W. Harpur, C.E. Boro' Engr. Town Hall	do.
Schools (Art and Technical)	Kingston-on-Thames Corporation	A. Boxall, Surv. 6, John-street, W.C.	do.
Thirty-two Houses, Leeds-road, Otley, Yorks	.....	Fairbank & Wall, Archt. 3, Manor-square, Otley	do.
School Extension, Aberaman	Aberdare School Bd.	T. Roderick, Archt. Clifton-street, Aberdare	Feb. 11
*Iron Roofing and Paving to Extension of Market	Trustees, Borough Market	H. Jarvis & Son, 29, Trinity square, S.E.	Feb. 12
Laundry at Asylum, Morpeth	Northumberland C.C.	J. Cresswell, C.E. Town Hall	do.
Pipe Sewer	Durham R.D.C.	G. Gregson, Surv. 43, Western-hill, Durham	do.
Schools, Llandyssil, Wales	.....	J. H. Phillips, Archt. St. John's-chmbrs, Cardiff	do.
Three Houses, Cesarea, Wales	.....	R. L. Jones, Archt. 14, Market-street, Carnarvon	Feb. 13
Additions to Schools, Springfield	Sheffield School Board	C. J. Innocent, Archt. 17, George-street, Sheffield	do.
Hospital, Pinley	Coventry Corporation	G. & J. Steane, Archt. Little Park-st. Coventry	do.
School	Fowey (Cornwall) Sch. Board	S. Trevail, Archt. Truro	do.
Two Houses, The Cliffs, Gorleston, Norfolk	A. C. Jupp	W. B. Cockrill, Archt. Gorleston	do.
*Tar Paving	Woodford U.D.C.	C. Matthew, Council Offices, Woodford	Feb. 15
Additions to Asylum, Aberdeen	Asylum Corporation	G. Taylor, Clerk of Works, Asylum, Aberdeen	do.
Shop Premises, Simmons-street, Blackburn	Blakey Moor Co-op. Society	Simpson & Duckworth, Richmond-chmbrs, Blackburn	do.
Guernsey Granite, &c.	Dover Town Council	E. W. Knocker, Town Clerk	do.
School, Cwmtillery, Mon.	Aberystwith Sch. Bd.	G. Rosser, Archt. Victoria-buildings, Abercarn	do.
Club Buildings, Ovenden Ward, Halifax	.....	Methley Hall, Archt. 29, Northgate, Halifax	do.
Schools, Selside, near Kendal	.....	J. Hutton, Archt. Kendal	do.
Drainage Works, Scalebor Park, Burley, Yorks	.....	J. V. Edwards, County Surv. Wakefield	Feb. 16

CONTRACTS—*Continued.*

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
Workhouse Extension	Ashton-under-Lyne Union	B. Seymour, Union Offices, Stamford-street, Ashton-under-Lyne	Feb. 16
Exhibition Works, Mount Pleasant, Exeter	Exeter Horse Show Society	W. S. Crocte, Archt. 93, Paris-st. Exeter	do.
*Various Services and Supplies	Westminster Vestry	G. R. W. Wheeler, Town Hall, Caxton-street, S.W	do.
*Works and Materials	Tottenham U.D.C.	712, High-rd. Tottenham	do.
*Making-up Roads	do.	do.	do.
*Roadmaking and Paving Works	Greenwich Bd. of W.	Board Offices, 141, Greenwich-road, S.E.	Feb. 17
School, Wellington-terrace	Falmouth Sch. Bd.	Mr. Swift, Archt. Lemon-street, Truro	do.
School, Abertillery, Mon.	.....	Swash & Bain, Archt. 3, Friar's-chmbrs, Newport	do.
*Levelling and Paving Playground and Iron Fence	West Ham Union	Clerk's Office, Union-road, Leytonstone, E.	do.
Street Works, Newstead Estate, Halifax	.....	R. Horsfall, Archt. 15, George-st.	Feb. 18
Additions to Asylum, Rainhill	Lancs. Asylums Bd.	Clerk, Asylum Offices, Rainhill	Feb. 19
*Reconstructing Pier, Brighton	Brighton West Pier Co	Secretary	do.
Street Works, Trinity-st. &c.	Batley T.C.	H. Dearden, Surv. Market-place	Feb. 20
Sewerage Works	Kettering U.D.C.	T. R. Smith, Engr. Market-hill, Kettering	do.
Gate Lodge and Museum, Fitz Park, Cockermouth	.....	T. Hodgson, Station-road, Cockermouth	do.
*Alterations and Additions	The Albert Institute, Windsor	The Institute	do.
*New Roof and Alterations to Church	Brentwood Congregational Church Com.	C. Pertwee, Bank-chmbrs, Chelmsford	do.
*External Painting of County Asylum	Hants County Asylum Visitors	Clerk to the Visitors	Feb. 22
*Foundations of Lunatic Asylum	London County Council Asylum Committee	The Clerk, 21, Whitehall-place, S.W.	do.
*School Buildings	Walthamstow Sch. Bd.	W. A. Longmore, 7, St. Alie-st. Whitechapel, E.	Feb. 23
Dispensary and Residence, Castledermot, Irgland	Athy Union	T. P. Orford, Workhouse, Athy	Feb. 24
*Boiler House, Floors, and Machinery Foundations, &c.	Walthamstow U.D.C.	G. W. Holmes, Town Hall	Feb. 26
*Church, Brynmawr	The Committee	Nicholson & Hartree, Archt. Hereford	Feb. 27
*Retort House, Coal Stores, &c.	Sheffield United Gas Light Co.	Fletcher W. Stevenson, Offices, Commercial-st. Sheffield	do.
*Sewerage	Midsomer Norton U.D.C.	W. F. Bird, Market Hall, Midsomer Norton	do.
Restoration of Church Tower, Culmington, Salop	.....	Rev. D. E. Holland, Culmington, Bromfield	Mar. 1
*Sewer Pipes, &c.	Bath U.S.A.	C. R. Fortune, Guildhall, Bath	Mar. 2
Additions to Post Office Buildings, Harrogate	Yorks Banking Co.	T. E. Marshall, Archt. Princes-st. Harrogate	No date
Additions to Offices, Tower-lane, Ipswich	W. E. Kersey	J. S. Corder, Archt. Wimborne House	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.
*Architectural Assistant	Accrington Corp.	120*l.* per annum	Feb. 11
*Assistant Superintendent of Works	S. Met. School District	2*l.* per week	Feb. 13
*Building Inspector	Tottenham U.D.C.	150*l.* per annum	Feb. 16
*Road Foreman	Twickenham U.D.C.	2*l.* 2*s.* per week	Feb. 17
*Building Inspector	Middlesbrough Streets Committee	2*l.* 2*s.* weekly	Feb. 20

Those marked with an asterisk (*) are advertised in this Number. *Competitions, p.* iv. *Contracts, pp.* iv. vi. & viii. *Public Appointments, pp.* xviii. & xxi.

JANUARY 21.—1,617, G. Buckley, Kitchen Ranges.—1,650, R. Pritchett, Stoves or Fireplaces.—1,684, A. Binkerd, Saw Clamp.—1,705, T. Smart, Wire-Cutting Apparatus for cutting bricks, &c.

JANUARY 22.—1,712, M. Yarrow and T. Rowbotham, Chimney Pot.—1,725, J. Watson, Sash Fastener.—1,728, G. Greenwood, Flooring Cramp.—1,745, R. Gibson and others, Connexions for sanitary fittings.

JANUARY 23.—1,815, E. Highton, Water Waste Preventers for flushing purposes —1,839, J. Smith, Chimney Pots.—1,883, A. Churley and Greenway Clive, Vale & Co., Ltd., Lock Furniture.

PROVISIONAL SPECIFICATIONS ACCEPTED.

24,337, E. Holding and others, Opening and Closing Windows or Moving Shutters of any description.—28,788, J. Haynes, Sash Line Fasteners.—28,829, R. Fraser, Roof Supporting Frames, said improvement being also applicable to other purposes.—28,832, G. Brown, junior, Brake for Sash Weights, &c.—29,429, B. Mills, Brick Kilns.—29,864, A. Zboril and A. Schenk, Plates, Slabs, &c., for Floors, Pavements, Fire-places, and similar purposes, and methods of manufacturing same.—29,865, A. Zboril and A. Schenk, Covering for Floors, Walls, &c.—29,893, J. Torbock and T. Fenney, Artificial Tiles or Slates, for roofing &c., and in laths to be used in connexion with same.—60, J. Kirkbridge, Sash Fastener.—180, H. Norris, Decoration of Plate or Sheet Glass for use in General House Decoration, and for Furniture Panels, Overmantels, Fire Screens, &c.—595, R. Gregory, Road Scarifying Machines. 757, W. Hewitt, Tiles and Apparatus therefor.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to opposition for two months.

1,680, W. Johnson, Fire Grates.—2,852, E. Thomas, Brick-drying Chambers.—3,004, W. Le Ray, Preventing Bursting of Water Pipes by Freezing.—3,972, S. Neffgen, Artificial Stone.—4,597, S. Hellyer, Water-waste Preventing Flushing Apparatus.—5,034, F. Rogers, Chimney and other Cowls.—6,683, I. Parkinson, Domestic Fire Grates. — 18,745, W. Egginton, Portable Sewer-gas Extractor and Destroyer, in conjunction with Sewer Disinfector.—21,886, A. and L. Bolles, Window-sash Attachments.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

January 12.—By S. WALKER & SON (at Liverpool).

Liverpool.—54 and 56, Devonshire-rd., f., r. 89*l.* ... £1,200
Bevan's-lane, "The Old Brewery," together with 9 cottages and a plot of building land, area 5,333 yds., f., e.r. 121*l.* ... 860

January 13.—By T. EVANS (at Pwllheli).

Pwllheli, Carnarvon.—"Hafod" and "Caegarw" Farms, 122 a., f. ... 1,000

January 14.—By FAREBROTHER, ELLIS, CLARK, & Co.

Walworth.—25 to 49, and 53 to 67 (odd), East-st.; 48 to 74 (even), King and Queen-st.; 1 to 15, Lestock-pl.; also 22 houses in King's Arch-pl.; and 17 houses in North-row, area 71,000 ft., f., r. 1,755*l.* 18s. 6d. ... £13,350
East-st., "The Royal Albert," p.-h., f., r. 120*l.* 5,150

By NEWBON, EDWARDS, & SHEPHARD.

Clapham.—48, High-st., f., r. 24*l.* ... 4,600
Holloway.—64 and 66, Evershott-rd., u.t. 73¾ yrs., g.r. 12*l.*, r. 60*l.* ... 645
Hornsey Rise.—58, Corbyn-st., u.t. 73½ yrs., g.r. 6*l.*, r. 28*l.* ... 270
Highgate.—5 and 7, St. Alban's-rd., u.t. 54¾ yrs., g.r. 16*l.*, e.r. 130*l.* ... 1,240
Caledonian-rd.—43, Stanmore-st., u.t. 44 yrs., g.r. 6*l.*, e.r. 40*l.* ... 255

By A. BOOTH.

Holloway.—12, Anson-rd., u.t. 71¼ yrs., g.r. 5*l.* 5s., e.r. 60*l.* ... 530
76, Brecknock-rd., u.t. 52½ yrs., g.r. 7*l.*, r. 55*l.* ... 555

By J. A. & W. THARP.

Bethnal Green.—Green-st., i.g.r. 15*l.*, u.t. 29 yrs., g.r. 5*l.* 10s. ... 135
Green-st., &c., i.g.r. 14*l.* 6s., u.t. 21 yrs., g.r. 4*l.* 15s. ... 125
Walworth.—270, East-st., f., r. 38*l.* ... 500

January 15.—By. J. HIBBARD & SONS.

Stepney.—2 and 13, Antcliff-st., u.t. 31½ yrs., g.r. 7*l.*, r. 52*l.* ... 420
10, Newbold-st., u.t. 31½ yrs., g.r. 3*l.* 10s., r. 26*l.* 205
16, Newbold-st., u.t. 34 yrs., g.r. 4*l.*, r. 26*l.* ... 205

January 18.—By J. WALKER (at Hickling).

Hickling, Notts.—"Sissons Close," 5 a. 1 r. 13 p., f. ... 325
A freehold farmhouse, 2r. ... 250

By FOLEY, SON, & MUNDY (at Westbury).

Westbury, Wilts. — "Frogmore Farm," 45 a. 3r. 7 p., f. ... 2,400
Two enclosures, 20 a. 2 r. 38 p., f. ... 518

By J. BUTCHER (at Blackpool).

Blackpool, Lancashire.—A freehold building estate at Revoe, containing 54 a. 0 r. 37 p. ... 20,550

January 19.—By DEBENHAM, TEWSON, & Co.

City of London.—Falcon-sq., f.g.r. 240*l.*, reversion in 49 yrs. ... 6,300
33, Noble-st., Corporation lease, g r. 8*l.* 14s. 9d., fine 61*l.* 3s. 3d., r. 25*l.* ... 3,075
Bournemouth.—Surrey-rd., "Penheale," f. ... 1,200
Peasmarsh, Sussex.—A moiety of tithe rent charge, commuted at 330*l.* ... 1,340
Hampstead.—South-hill-pk., f.g.r. 19*l.* 19s., reversion in 89½ yrs. ... 490
Kentish Town.—Willingham-ter., i.g.r. 24*l.* u.t., 44 yrs., g.r. 1*l.* ... 370

By FURBER, PRICE, & FURBER (at Reigate).

Reigate, Surrey.—1 and 2, Wistaria-villas, f. ... 1,12

By ROGERS, CHAPMAN, & THOMAS.

Pimlico.—Cambridge-st., i g.r. 8*l.*, u.t. 30 yrs., g.r. 1s. ... £150
Hugh-st., i.g.r., 8*l.*, u.t. 30 yrs., g.r. 1s. ... 160

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental: u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard &c.

PRICES CURRENT OF MATERIALS.

TIMBER.

Greenheart, B.G.	ton	8/0/0 0/0/0
Teak, E.I.	load	11/0/0 16/0/0
Sequoia, U.S.	it.cu.	2/0 2/1
Ash, Canada	load	2/10/0 3/15/0
Birch, do.		2/10/0 5/5/0
Elm, do.		3/5/0 4/10/0
Fir, Dantsic, &c.		2/10/0 4/10/0
Oak, do.		2/10/0 3/10/0
Canada		4/15/0 5/15/0
Pine, Canada red		0/0/0 0/0/0
Do. Yellow		2/0/0 4/0/0
Lath, Dantsic, fath		4/10/0 5/10/0
St. Petersburg		5/0/0 6/10/0
Wainscot, Riga, &c., log		2/10/0 4/15/0
Odessa, crown		2/10/0 4/15/0
Deals, Finland 2nd & 1st std	100	8/10/0 9/0/0
Do. 4th & 3rd		8/10/0 9/0/0
Do. Riga		7/0/0 8/0/0
St. Petersburg, 1st yellow		10/10/0 13/0/0
Do. 2nd yellow		9/10/0 10/10/0
Do. white		9/0/0 11/0/0
Swedish		8/10/0 16/0/0
White Sea		8/10/0 16/10/0
Canada, Pine 1st		21/0/0 23/10/0
Do. do. 2nd		15/0/0 17/0/0
Do. do. 3rd, &c.		7/10/0 11/0/0
Do. Spruce, 1st		9/0/0 10/10/0
Do. do. 3rd and 2nd		7/10/0 8/15/0
New Brunswick		7/5/0 7/15/0
Battens, all kinds		5/0/0 20/0/0
Flooring boards, sq. 1 in. prep.		0/9/6 0/16/6
1st		0/8/0 0/13/0
Do. 2nd		0/6/0 0/7/6
Other qualities		
Cedar, Cuba, ft.		4½ /5
Honduras, &c.		/4 /5
Mahogany, Cuba		4½ /6
St. Domingo, cargo av.		/4½ 1/3
Mexican, do. do.		/4 /5
Tobasco, do. do.		/5 /7
Honduras, do.		/5 /6½
Box, Turkey, ton		4/0/0 15/0/0
Rose, Rio		7/0/0 16/0/0
Bahia		6/0/0 15/0/0
Satin, St. Doming.		0/0/7 0/1/0

TIMBER *(continued)*.

Satin, Porto Rico	0/0/7	0/1/6
Walnut, Italian	0/0/3	0/0/7

METALS.

Iron—Pig, in Scotland	ton	2/7/5 0/0/0
Bar, Welsh, in London		5/15/0 5/17/6
Do. do. at works in Wales		5/10/0 5/12/6
Do. Staffordshire, in London		5/15/0 6/10/0
COPPER—British cake and ingot		54 0/0 54 10/0
Best selected		55/0/0 55/10/0
Sheets, strong		6 /10/0 61/10/0
Chili bars		51/12/6 0/0/0
YELLOW METAL	lb.	0/0/5 0/0/5½
LEAD—Pig, Spanish	ton	11/17/6 11/18/9
English com. brands		12 0/0 12 2/6
Sheet, English 6 lbs. per sq. ft. and upwards		13/3/0 0/0/0
Pipe		13/13/9 0/0/0
ZINC—English sheet	ton	20/10/0 0/0/0
Vieille Montagne		21/10/0 0/0/0
Spelter		18/0/3 18/1/3
TIN—Straits		61/2/6 0/0/0
Australian		62/12/6 0/0/0
English Ingots		65/5/0 66 5/0
Banca		61/0/0 0/0/0
Billiton		59/15/0 60/0/0

OILS.

Linseed	ton	15/7 6 0/0/0
Cocoanut, Cochin		27/15/0 0/0/0
Do. Ceylon		24/0/0 0/0/0
Palm, Lagos		24/10/0 0/0/0
Rapeseed, English pale		27/10/0 27/15/0
Do. Brown		27/0/0 27/10/0
Cottonseed ref.		15/17/6 16/10/0
Oleine		18/10/0 19/10/0
Lubricating U.S.		0/6/3 0/7/6
Do. black		0/4/9 0/5/6
TAR—Stockholm	barrel	22/0 0/0/0
Archangel		0/12/6 0/0/0
Turpentine	ton	2/7/6 22/10/0

TENDERS.

[Communications for insertion under this Heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays.* N.B.—We cannot publish Tenders unless authenticated by the name and address of the sender: and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under £100, unless in some exceptional cases and for special reasons.]

ABERDEEN (N.B.).—For laying granite causeway, Rosemoun Viaduct, for the Town Council. Mr. Wm. Dyack, Burgh Surveyor, Town House, Aberdeen:—

Causewaying Rosemount Viaduct.

P. Tawse, Birchfield, Kemnay £1,108 11 4

Macadamising Hosefield-road.

James Leith, jun., 17, Elmfield-avenue 134 3 0

Causewaying Union-terrace.

P. Tawse, Birchfield, Kemnay 1,026 6 8

Macadamising Balmoral-place (extension).

James Fyfe, Westburn, Union-grove 295 10 6½

[All of Aberdeen.]

ALNWICK.—For the execution of sewerage works, Barneyside, near Alnwick Castle, for the Urban District Council. Mr. Geoffrey Wilson, C.E., Town Surveyor, District Council Offices, Green Bat. Quantities by Town Surveyor (in specification):—

W. Thompson, jun.	£275	R. Hudson, Alnwick and Sunderland*	£261
D. Tait	263		

*Accepted.

ALTON.—Accepted for extensions to the iron buildings, The Abbey, Alton, for the Rev. Father C. P. Hopkins:—

W. Harbrow £724 12

BACUP (Lancs.)—For the execution of sewerage works, Brandwood-road, &c., for the Corporation. Mr. John Wilson, C.E. Borough Surveyor, Bacup:—

Enoch Tempest £2,622

J. Sharples & Co., Accrington (accepted) 2,018

BOSTON (Lincolnshire).—For the erection of a shop with a house in Bargate, for Mr. W. H. Robinson. Mr. James Rowell, architect, Borough Offices, Boston:—

Jno. Lucas	£572 0	W. Greenfield	£543 0
H. Hinds	570 0	H. W. Parker	499 12
Hill & Son and Pinder & Son	555 0	S. Sherwin*	495 0

*Accepted.

[All of Boston.]

BROUGHTON ASTLEY.—For the erection of hosiery factory, boiler-house, cooling-tank, at Broughton Astley, Leicestershire. Mr. T. S. Gordon, architect, Welford-place, Leicester:—

C. Wright	£3 774	Hardington & Elliott	£3,331
T. Richardson & Son	3.444	I. O. Jewsbury	3,279
H. Bland	3.340	Haycock & Son	3.166

CHOLDERTON.—For two entrance lodges and two cottages, Home Farm, for Mr. H. C. Stephens, M.P. Messrs. Cuckmay & Sons, architects:—

H. A. Annett & Son £1,700

[No competition.]

CONWAY.—For water main extension (Sarn Mynach to Llysfaen), for the Conway and Colwyn Bay Joint Water Supply Board. Mr. T. B. Farrington, Engineer, Municipal Offices, Conway:—

Parry, Jones, & Co	£11,750 0 0	Jacob Biggs	£8 875 0 0
Owen Morris	9,667 0 0	John Jowett	8,807 15 3
I. E. Ewart	9.537 10 0	John Roberts	8,591 14 10
Hy. Roberts	9.132 15 0	Jones & Sons	8,479 10 0
Winard & Western	9,074 0 0	Evan Evans & Co.	8 375 0 0
Galt & Farquharson	8.948 0 0	Jones & Sons	8,367 17 6
Geo. Bevan	8.940 0 0	Geo. Law	8,177 0 0
Geo. Bugbird	8,910 0 0	Altd. Sheffield, Rhyl (accepted)	7.995 0 0

CUPAR (Fife, N.B.).—For the execution of drainage works, Upper and Lower Largo, for the St. Andrew's District Committee. Mr. Henry Bruce, C.E., County Buildings, Cupar, Fife. Quantities by Engineer:—

Wm. Pollock	£3,610 14 11	John Martin	£2.473 6 0
T. & S. Crawford	2,977 16 7	Robt. Gilmour	2,407 10 4
James Kirk	2,954 6 6	Geo. Mackay & Sons, Broughty Ferry*	2 303 2 4
Chas. McAndrew	2.673 10 6	John Stevens	2,241 5 5
David White	2,638 16 5	Wilkie & Gill	2,070 15 11
Jas. Strachan & Son	2 599 4 8		
John Morris & Sons	2,582 8 0		
David Gilmour	2,528 7 8		

*Accepted.

EAST MOLESEY.—For constructing and laying main sewer, Molesey Park-road, for the Urban District Council. Mr J. Stevenson, Surveyor, District Council Offices, Walton-road, East Molesey:—

W. Adamson	£419	Geo. Bell, Tottenham*	£395

*Accepted.

ERDINGTON.—For kerbing, channelling, and making portion of Trafalgar-road, Erdington, and providing storm-water drain, for the Erdington Urban District Council. Mr. J. Edward Willcox, Engineer:—

Currall & Lewis	£512	John White, jun.	£490
Jones & Fitzmaurice	500	Jacob Biggs	485
G. Trentham	493	G. Law, Kidderminster*	461

[Engineer's estimate, £478.]

*Accepted.

ERDINGTON.—For Six-ways improvement scheme, Erdington, Mr. J. Edward Willcox, Engineer:—

Jones & Fitzmaurice	£145	G. Trentham, Handsworth*	£115
Geo. Law	143		

*Accepted.

[Engineer's estimate, £136.]

HALIFAX.—Accepted for additions, &c., to Holy Trinity Schools, West Parade. Messrs. Jackson & Fox, architects, 22, George-street, Halifax. Quantities by the architects:—

Masonry.—J. Whatmough, King Cross, Halifax £578 10

Carpentry and Joinery.—F. Greenwood & Son, Gibralter, Halifax 270 0

Plumbing, Glazing, and Heating Apparatus.—John Naylor & Son, Halifax 158 0

Slating and Plastering.—Arthur Firth, Halifax 108 0

Painting.—Murgatroyd Brothers, Halifax 13 0

HORSHAM (Sussex).—For the supply of granite to Shoreham Harbour, for the West Sussex County Council. Mr. W. B. Purser, County Surveyor, 31, Bedford-road, Horsham:—

	Per ton.
Granite, Quenash.—C. M. Manuelle, 12, Lime-street, E.C. (accepted)	11 0
,, Penlee.—J. Kennalls	10 3
,, Guernsey.—A. & F. Manuelle	11 2
,, Guernsey.—J. Moulew & Co.	12 6
,, Guernsey.—W. Griffiths	11 4
Quartzite.—Kent-road Maintenance and Supply, Ltd.	11 6
Granite, Guernsey.—W. Hudson	12 0
,, Cherbourg.—W. Hudson	11 6
,, Burghes.—Kaltenbach & Schmitz	11 1
,, Welsh.—Brundit & Co.	11 9
Basalt.—Lyon & Co.	10 6

LEYTONSTONE.—Accepted for the erection of iron mission in Leslie-road:—

W. Harbrow £197 10

LONDON.—For alterations at "The Cooper's Arms" public-house, St. Luke's, E.C. Mr. Herbert Riches, architect, 3, Crooked-lane, King William-street, London, E.C.:—

W. Hawtrey & Son	£763 10	G. Veale	£699 0
J. H. Pugh	742 0	I. J. Thompson	685 0
A. Porter	704 0	T. Osborn & Sons*	655 0

*Accepted.

LONDON.—Accepted for repairs and decorations at "The King's Head," Bow-road, London, E. Mr. Herbert Riches, architect, 3, Crooked-lane, King William-street, London, E.C.:—

Geo Lusk £206

LONDON.—For cleaning, painting, and decorating at the Royal Institute of Water Colours, Piccadilly, under the direction of Messrs. J. T. Wimperis & Arber, architects, 25, Sackville-street, Piccadilly, W.:—

Waring & Co.	£861 0	Maple & Co., Ltd.	£639 0
Debenham & Freebody	706 13	Johnson & Co.	624 0

LONDON.—For the erection of new dairy stables and offices in Queen's-road, Peckham, for Mr. J. Crutcher. Mr. W. G. Shoebridge, architect. Quantities supplied by Mr. F. J. W. Miller:—

Simmonds & Son	£7,935	J. O Richardson	£6,78
Simpson & Cove	7.175	Smith	6.747
Turtle & Appleton	7.070	Carmichael	6,680
Balaam Bros.	6,999	Parker	6,539
Lascelles	6,085		

LONDON.—For pulling down and rebuilding Swan House, Moorgate-street, E.C., for Mr. Robert Whitehead. Messrs. Edmeston & Gabriel, architects. Quantities supplied by Messrs. G. R. Tasker & Sons:—

Cowley & Drake	£3 948	Wm. Shepherd	£3 575
Skinner	3.886	Young	3.485
Porter	3.843	Carmichael	3.400
Roberts	3 724	J. O. Richardson*	3.237

*Accepted.

LONDON.—For alterations to No. 45, Kirby-street, Hatton-garden, E.C., for Mr. S. R. Boutle and Mrs. Jones, trustees of the property. Mr. Jas. Hardman, architect. No quantities supplied:—

King & Son	£560	J. O. Richardson (accepted)	£473

LONDON.—For alterations and repairs at No. 36, Trebovir-road, Earl's-court, S.W., for Mr. J. Arnold. Mr. Geo. Waymouth, architect:—

Richardson Bros.	£387 0	Lidstone & Sons	£320 0
Rugg & Son	321 7	Stevens Bros.	244 0

LONDON.—For the erection of a bottling shed at George-yard, Whitechapel, E, for the Victoria Wine Company. Mr. Geo. Waymouth, architect:—

Richardson Bros.	£465	Barlow & Roberts	£373
Lown & Son	397		

LONDON.—For alterations and repairs at Percy House, Notting Hill, W., for the Victoria Wine Company. Mr. Geo. Waymouth, architect:—

Lown & Son	£280	Barlow & Roberts	£219
Richardson Bros.	254	Briston & Sons	204

NEWCASTLE.—For Primitive Methodist New Church, Kingsley-terrace, Newcastle, for the trustees. Messrs. Marshall & Dick, architects, Newcastle:—

	Main building.	Spire and Tower.	Total.
W. Baston	£4,790 0 0	£630 0 0	£5,420 0 0
J. Ferguson	4,671 0 0	715 0 0	5,386 0 0
J. Jackson	4,558 0 6	817 0 0	5,375 0 6
Alex. Pringle*	4,536 0 0	754 0 0	5,290 0 0
Middlemiss Bros.	4 430 0 0	800 0 0	5,230 0 0
T. Weatheritt	4,494 0 0	700 0 0	5,194 0 0
Alex. Bruce	4,396 18 6	669 10 0	5,066 8 6
S. Easten	4,297 0 0	767 0 0	5,064 0 0
G. H. Mauchlen	4,106 6 0	613 10 0	4,719 16 0
T. Hutchinson, Elswick-lane†	4,129 6 6	561 2 8	4,690 9 2

* Gateshead. Rest of Newcastle. † Accepted.

LONDON.—For superstructure to warehouses at Ratcliff Cross Wharf, for Messrs. Pinchin, Johnson, & Co. Messrs. Bradshaw Brown & Co., architects, Billiter-square-buildings, E.C.:—

	No. of weeks in which to complete.	Amount.
Scrivener & Co.	—	£10,450
Porter	34	10,269
Gammon	—	10,200
Kirk & Randall	28	10,160
Peacock Bros.	—	9,862
H. L. Holloway	22	9,120
W. Gladding	42	8,953
Munday & Son	40	8,831
Chafen & Newman	23	8,724

NEW BROMPTON (Kent).—For the erection of a villa residence, Balmoral-road, for Mr. S. Pierson. Mr. E. J. Hammond, architect, 111, High-street, New Brompton:—

J. H. Park	£507	F. A. Hamond	£375
J. L. Trueman	462	C. E. Skinner, Chatham*	335
H. Harris	395		

*Accepted.

NEWPORT (Mon.).—For the erection of a footbridge from William-street to Courtybella-terrace, for the Corporation. Quantities by the Borough Engineer (Mr. R. H. Haynes):—

The Thames Ironworks & Shipbuilding Co.	£683 13 6	Joseph S. Ellis & Co., Chepstow*	£562 16 10
Isca Foundry Co.	626 2 6		

*Accepted.

[Borough Engineer's estimate, £570.]

NORDEN (Lancs.).—For the erection of workshop and showroom, Water-street, for Messrs. Meyrick & Holt, Limited. Mr. J. W. Sunderland, architect, Church View, Norden. Quantities by architect:—

Thomas Berry & Son	£1,158 0 0	Cropper & Howorth	£1,053 0 0
Ashworth & Woolfenden	1,082 0 0	Endersby & Mutch	1,033 11 3
T. Ashworth & Sons	1,070 0 0	John Pool, Littleborough*	896 0 0

*Accepted.

NORWICH.—For alterations of buildings to convert same to the purposes of public baths, Norwich. Mr. Arthur E. Collins, City Engineer, architect, Norwich:—

New & Mayne	£1,230	H. C. Greengrass, 58, Pitt-street, Norwich*	£770
Downing & Son	588		
Chapman & Son	946		

Supplying and fixing boiler, calorifiers and other engineering work.

C. H. Rosher	£1,952	Harper Twelvetrees	£1,105
J. Potter & Son	1,528	C. P. Kinnell & Co.	1,100
New & Mayne	1,450	Fraser & Fraser	1,043
Williams Bros. & Co.	1,432	T. Bradford & Co., Holborn*	849
Moorwood, Sons, & Co.	1,212		

*Recommended for acceptance.

NORWICH.—For additions to the "Queen's Hotel," Great Yarmouth. Mr. A. J. Lacey, architect, 6, Upper King-street, Norwich:—

S. Chapman & Son	£899	G. W. Beech	£824
J. Downing & Sons	898	W. Cork, Northgate-street, Great Yarmouth*	733
Carter & Wright	840		

*Accepted.

PORT TALBOT (Wales).—For the erection of four shops, &c., for Mr. B. Evans, J.P., of Swansea. Messrs. Margrave and Peacock, architects, 46, Wind-street, Swansea, and 2, High-street, Port Talbot. Quantities by the architects:—

J. & S. Rees	£4,500 0 0	Henry Billings	£3,855 0 0
D. Davies	4,480 0 0	Morgan Cox	3,824 0 0
John Davies	4,256 10 0	Thomas Waters	3,649 0 0
Thomas, Watkins, & Co.	4,135 0 0	Gustavus Bros.	3,648 1 6
Thomas Davies	4,090 0 0	Walters & Johns, Morriston*	3,562 0 0
W. Williams	4 000 0 0	J. & D. Jones	3,469 19 2
C. & F. Gaen	3,945 0 0		

*Accepted.

RIBCHESTER (Lancs.)—For the erection of cloakroom, &c., Knowle Green Schools, for the Managers. Mr. J. A. Seward, architect, 119a, Fishergate, Preston:—

John Sandeson	£198 0 0	John Parker	£166 0 0
Wm. Almond	183 10 0	John Counsel	165 10 0
John Cartmell & Son	183 9 0	Thomas Croft & Sons	165 0 0
Richard Robinson	176 11 9	James Barton	155 0 0

LONDON.—For paving, &c, for the Vestry of Paddington. Mr. G. Weston, Surveyor:—

	FOOTWAY KERB.								YORKSHIRE PAVING.			
	12 in. by 8 in.				6 in. by 12 in.							
	Aberdeen.		Norway.		Aberdeen.		Norway.		Squared.		Unsquared.	
	Straight.	Circular.	Straight.	Circular.	Straight.	Circular.	Straight.	Circular.	2½ in.	3 in.	2½ in.	3 in.
	Per foot run.	Per foot run.	Per Foot run.	Per Foot run.	Per Foot run.	Per Foot run.	Per Foot run.	Per Foot run.	Per Foot sup.	Per Foot sup.	Per Foot sup.	Per Foot sup.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	d.	d.	d.	d.
W. Griffiths	2 2	2 5	1 10	2 1	1 10	2 0	1 8	1 10	10½	11	9½	10
A. & F. Manuelle	2 1	2 4	1 10	2 0	1 11	2 2	1 8	1 10	10½	11	9½	10
J. Mowlem & Co.	2 2	2 4	1 10½	2 0½	2 0	2 2	1 8½	1 10½	10½	11½	9½	10½
Nowell & Robson*	2 0	2 3	1 8	1 11	1 10	2 1	1 6	1 9	9½	10½	8½	9½
E. Rogers & Co.	2 3	2 6	2 0	2 3	2 0	2 3	1 10	2 1	10½	11½	9½	10½
Tildesley, Shepherd, & Mabson	2 2	2 4	1 11	2 1	2 0	2 2	1 9	1 11	10½	11½	9½	10½
G. Wimpey & Co.	2 2	2 4	2 0	2 2	2 0	2 2	1 9	1 11	11½	11	9	10

*Accepted.

CONTRACT PRICES, 1896-97.

Nowell & Robson	s. d. 2 0	s. d. 2 3	s. d. 1 6	s. d. 1 8	s. d. 1 10	s. d. 2 1	s. d. 1 4	s. d. 1 6	d. —	d. —	d. 8½	d. 9½

NEW GRANITE PAVING BLOCKS OR CUBES.

	Enderby.			Narborough.			Mountsorrel.			Aberdeen.		
	5 by 6in. Per ton.	4 by 4in. Per ton.	3 by 6in. Per ton.	5 by 6in. Per ton.	4 by 4in. Per ton.	3 by 6in. Per ton.	5 by 6in. Per ton.	4 by 4in. Per ton.	3 by 6in. Per ton.	5 by 6in. Per ton.	4 by 4in. Per ton.	3 by 6in. Per ton.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
W. Griffiths	27 6	29 0	31 0	27 6	29 0	31 0	28 6	30 0	32 0	30 0	36 0	36 0
A. & F. Manuelle	27 6	29 0	31 0	27 6	29 0	31 0	29 0	32 0	32 0	30 0	36 0	36 0
J. Mowlem & Co.	27 0	29 0	31 0	27 0	29 0	31 0	28 0	29 0	31 0	30 0	36 0	36 0
Nowell & Robson*	27 0	28 6	30 0	27 0	28 6	30 0	28 0	29 6	30 0	29 6	35 0	35 0
E. Rogers & Co.	27 6	29 0	31 0	27 6	29 0	31 0	28 0	29 0	31 0	30 0	36 0	36 0
Tildesley, Shepherd & Mabson	28 0	30 0	33 0	29 0	30 0	33 0	30 0	30 0	33 0	32 0	36 0	37 0
G. Wimpey & Co.	27 6	29 6	32 0	27 6	29 6	32 0	28 6	30 6	32 0	30 0	36 0	36 0

*Accepted.

CONTRACT PRICES, 1896-97.

Nowell & Robson	s. d. 26 0	s. d. 27 6	s. d. 29 0	s. d. 26 0	s. d. 27 6	s. d. 29 0	s. d. 27 0	s. d. 28 6	s. d. 30 0	s. d. 27 6	s. d. 35 0	s. d. 34 0

SCARBOROUGH.—For the erection of shops, stables, &c., St. Thomas-street, for Mr. W. Vasey. Mr. Charles Edeson, architect, 95, Huntriss-row, Scarborough:—

Bricklaying, &c.—J. W. Bland, 33, Nelson-street	£790 0 0
Joinery.—G. Scales, Melrose-street	523 0 0
Smith's and Foundery.—Appleby & Brodgen, Sussex-street	46 5 9
Plumbing and Glazing.—Chatwin & Parkinson, North-street	198 10 10
Painting, &c.—T. Fidler, Victoria-road	29 6 0
Slating.—J. Hardgrave, Bellevue-parade	42 5 0

SKEGNESS (Lincolnshire).—For the erection of a bungalow on Victoria Promenade, for Mr. A. Reynolds, of Boston. Mr. James Rowell, architect, Borough Offices, Boston:—

J. Crawshaw	£553 0	G. Dunkley	£472 10
Hill & Son, and Pinder & Son	490 0	C. Jessop	465 0
S. Sherwin	481 0	J. Comer	437 0
		H. W. Parker, Boston*	430 10

* Accepted.

TYNEMOUTH.—For alterations and new shops with rooms over in Percy Park-road, Tynemouth, for Mr. T. Moore. Messrs. Marshall & Dick, architects, Newcastle and North Shields:—

Henry Bower	£1,042 3 9	Thos. Coulson	£909 7 0
J. L. Miller	994 14 3	James Douglass, Cullercoats*	867 3 4
J. Hutchinson	985 7 6		
Thos. Robson	942 17 0		

* Accepted.

TYNEMOUTH.—For new schools, North Shields, for the Tynemouth Board School. Messrs. Marshall & Dick, architects, Newcastle and North Shields:—

J. Elliot, North Shields £7,881

[Accepted subject to the approval of the Educational Department.]

WALSALL.—For providing and laying sewer, Little Newport-street, for the Corporation:—

J. Atkins, Ryecroft-hill, Walsall £108 16

WALTHAMSTOW.—Accepted for the erection of iron mission church in Oliver-road, Walthamstow. Mr. F. Boreham, architect:—

W. Harbrow £810

WATER ORTON.—Accepted for completing outfall sewer and steel pipes over river, and schedule of prices for house drainage works. Mr. J. Edward Willcox, C.E., Birmingham, engineer:—

Mr. H. Holloway, Wolverhampton £650

[Also Mr. Holloway's schedule for house drainage works.]

WEDNESBURY.—For the execution of sewerage works, Holden-road and Oxford-street, for the Corporation. Mr. E. Martin Scott, Borough Engineer, Town Hall, Wednesbury:—

George Law	£380 18 6	John W. Fereday	£294 14 3
Currall, Lewis, & Martin	375 0 0	F. J. Smith	288 0 0
H. Hughes & Son	300 0 9	John Jevons, Dudley*	264 8 9

* Accepted.

WINCHESTER.—For alterations and reparations at No. 4, The Close, Winchester. Converting the same into Judges' lodgings, for the Dean and Chapter of Winchester. Mr. J. B. Colson, architect, Winchester:—

J. Thompson	£2,987	G. Hooker	£2,620
T. Grace	2,930	F. Bascomb	2,450
G. H. Tucker	2,929	C. A. Hutchings, Winchester*	2,400
E. Carter & Son	2,800		

* Accepted.

WINCHFIELD (Hants).—For the erection of additional vagrant wards at the Union House, for the Hartley Wintney Union Guardians. Mr. H. T. Sugden, architect, Eversley. Quantities by the architect:—

J. J. B. Cooper	£2,799	Liming Bros.	£2,631
W. J. Bloxham	2,787	Wm. Hawkins	2,610
G. Hooker	2,766	McWilliam & Son	2,585
McC. E. Fitt	2,645	Pool & Son, Hartley-row*	2,500

* Accepted conditionally.

YORK.—For additions to the Wenlock Laundry, Ambrose, street. Mr. G. H. F. Jones, architect, 8, Lendal, York:—

J. Keswick & Son	£1,856 0 0	J. & T. Biscomb	£1,447 0 0
G. Underwood	1,669 11 8	W. Bellerby	1,340 19 0
R. Martin	1,525 16 5	W. Birch	1,275 8 6
J. Simpson	1,521 0 0	Horner & Sons, Bishopthorpe, York*	1,198 0 0
T. P. Barry	1,448 17 0		

* Accepted.

TO CORRESPONDENTS.

H. A. A. & Son, T. A. B.—(Amounts of tenders should have been stated.) E. H. L. B. (Paragraphs have already [appeared). A. C. (Below our limit.)

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

We cannot undertake to return rejected communications.

Letters or communications (beyond mere news items) which have been duplicated for other journals are NOT DESIRED.

We are compelled to decline pointing out books and giving addresses.

Any commission to a contributor to write an article is given subject to the approval of the article, when written, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

All communications regarding literary and artistic matters should be addressed to THE EDITOR; those relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and *not* to the Editor.

WATFORD.—For making five roads, Harwoods Farm Estate:—

Ford	£4,665 0 0	Bell	£3,021 0 0
Wheeler	4,342 0 0	Reed	3,016 0 0
Hebburn	3,895 0 0	Hunt	2,972 9 0
Hall & Son	3,785 0 0	W. Jenner	2,919 2 7
Tree & Son	3,479 0 0	F. Dupont	2,854 14 4
Brunton	3,433 0 0	Ballard	2,797 9 9
Martin	3,396 0 0	W. Judge	2,770 0 0
Lee	3,366 0 0	Thos. Adams	2,677 2 10
Maim	3,267 0 0	J. Jackson	2,615 8 7
Killingback	3,254 0 0	W. Hollingsworth	2,596 0 0
Wimpey & Co.	3,235 0 0	Parsons & Taylor	2,330 0 1
Coulson & Lofts	3,194 0 0	Siddons & Freeman	2,000 0 0
J. Hare	3,144 0 0		

PUBLISHER'S NOTICES.

***Registered Telegraphic Address*, 'THE BUILDER,' LONDON.**

THE INDEX and TITLE-PAGE for VOLUME LXXI. (July to Dec. 1896) was given as a supplement with the number dated Jan. 9.

CLOTH CASES for Binding the Numbers are now ready, price 2s. 6d. each; also

READING CASES (Cloth), with Strings, price 9d. each, and

THE SEVENTY-FIRST VOLUME of "The Builder" (bound), price Twelve Shillings and Sixpence, is now ready.

SUBSCRIBERS' VOLUMES, on being sent to the Office, will be bound at a cost of 3s. 6d. each.

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SITUATIONS VACANT, PARTNERSHIPS, APPRENTICESHIPS, TRADE AND GENERAL ADVERTISEMENTS.

Six lines (about fifty words) or under ..... 4s. 6d.
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SITUATIONS WANTED.

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***** Stamps *must not* be sent, but all small sums should be remitted by Cash in Registered Letter or by Postal Orders, payable to DOUGLAS FOURDRINIER, and addressed to the Publisher of "THE BUILDER," No. 46, Catherine-street, W.C.**

Advertisements for the current week's issue are received up to THREE o'clock p.m. on THURSDAY, but "Classification" is impossible in the case of any which may reach the Office after HALF-PAST ONE p.m. on that day. Those intended for the Front Page should be in by TWELVE noon on WEDNESDAY.

SPECIAL.—ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same must reach the Office before 10 a.m. on WEDNESDAY MORNING.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, &c. left at the Office in reply to advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

PERSONS Advertising in "The Builder," may have *Replies addressed to the Office*, 46, Catherine-street, Covent Garden, W.C. *free of charge*. Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage.

AN EDITION Printed on THIN PAPER, for FOREIGN and COLONIAL CIRCULATION, is issued every week.

READING CASES, { NINEPENCE EACH. By Post (carefully packed) 1s

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SLATE MERCHANT,

SLATER and TILER.

ESTIMATES GIVEN FOR

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To be executed by Contract in any part of ENGLAND.

Penrhyn - Bangor,

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BETHNAL GREEN SLATE WORKS,

BETHNAL GREEN, LONDON, E.

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"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom, at the rate of 19s. per annum PREPAID. To all parts of Europe, America, Australia, New Zealand, India, China, Ceylon, &c., 26s. per annum. Remittances (payable to DOUGLAS FOURDRINIER) should be addressed to the publisher of "THE BUILDER," No. 46, Catherine-street, W.C.

THE BATH STONE FIRMS, Ltd.

BATH,

FOR ALL THE PROVED KINDS OF

BATH STONE.

FLUATE, for Hardening, Waterproofing, and Preserving Building Materials.

HAM HILL STONE.

DOULTING STONE.

The Ham Hill and Doulting Stone Co.

(incorporating The Ham Hill Stone Co. and C. Trask & Sons, The Doulting Stone Co.).

Chief Office:—Norton, Stoke-under-Ham, Somerset.

London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand,

Asphalte.—The Seyssel and Metallic Lava Asphalte Company (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to the Forth Bridge Co. [Advt.

SPRAGUE & CO.'S

INK-PHOTO PROCESS,

4 & 5, East Harding-street, Fetter-Lane, E.C. [Advt.

QUANTITIES, &c., LITHOGRAPHED accurately and with despatch.

METCHIM & SON, 20, Parliament-st. S.W.

"QUANTITY SURVEYORS' TABLES,"

For 1897, price 6d. post 7d. In leather 1/- Post 1/1 [Advt

THE

French Asphalte

COMPANY,

Suffolk House, Cannon-street, E.C.

SUPPLY THE BEST MATERIAL AND WORKMANSHIP FOR BUILDINGS, DAMP COURSES, AREAS, ROOFS, WASHHOUSE AND DAIRY FLOORS, &c., &c.

This Asphalte was chosen to be laid at Sandringham, on the new General Post Office, and other important buildings.

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COPPER AND ZINC ROOFING.

F. BRABY & CO.

LONDON. ** LIVERPOOL. ** GLASGOW.

352 to 364, Euston-road, N.W **6 and 8, Hatton Garden.** **47 and 49, St. Enoch-square.**

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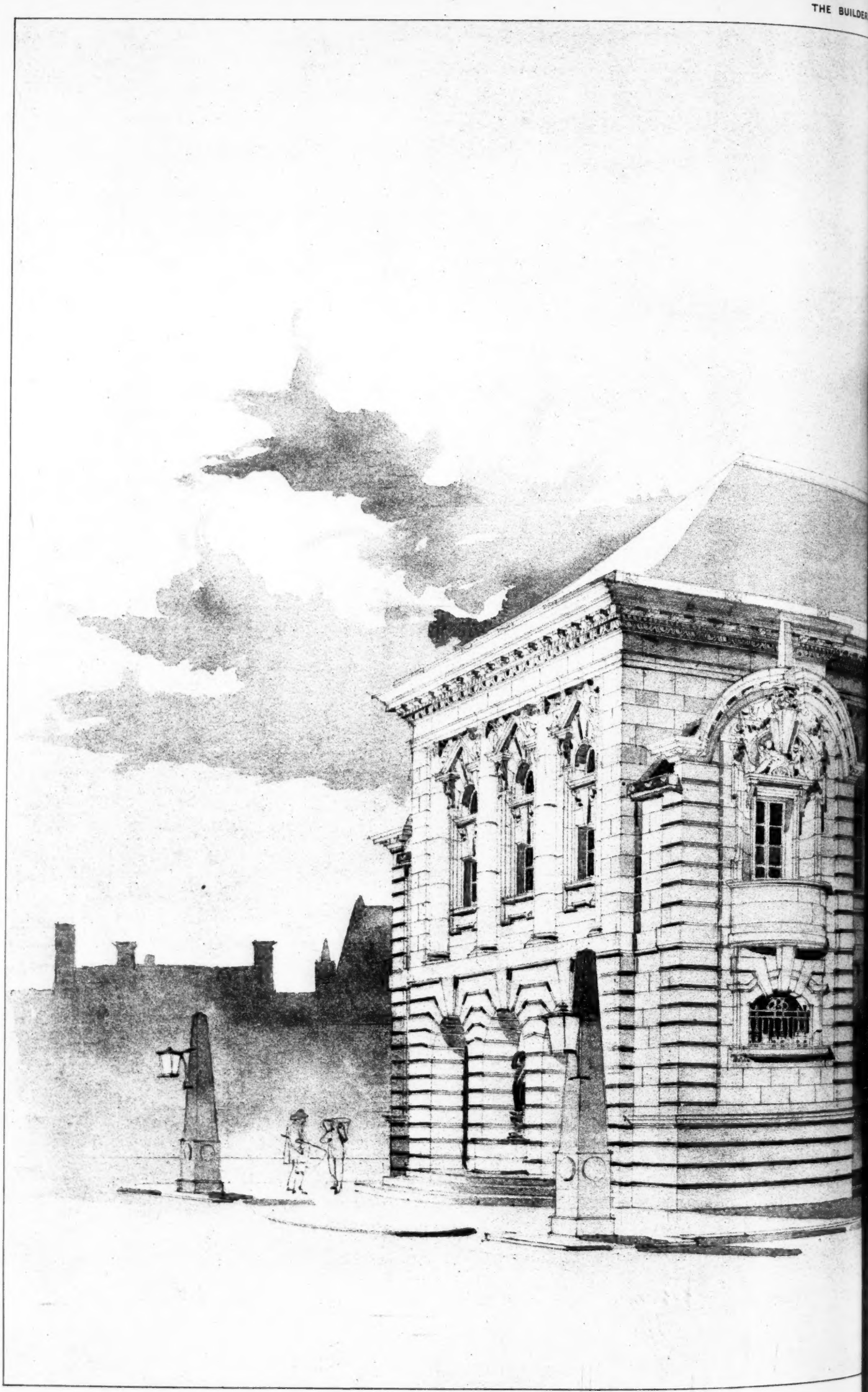
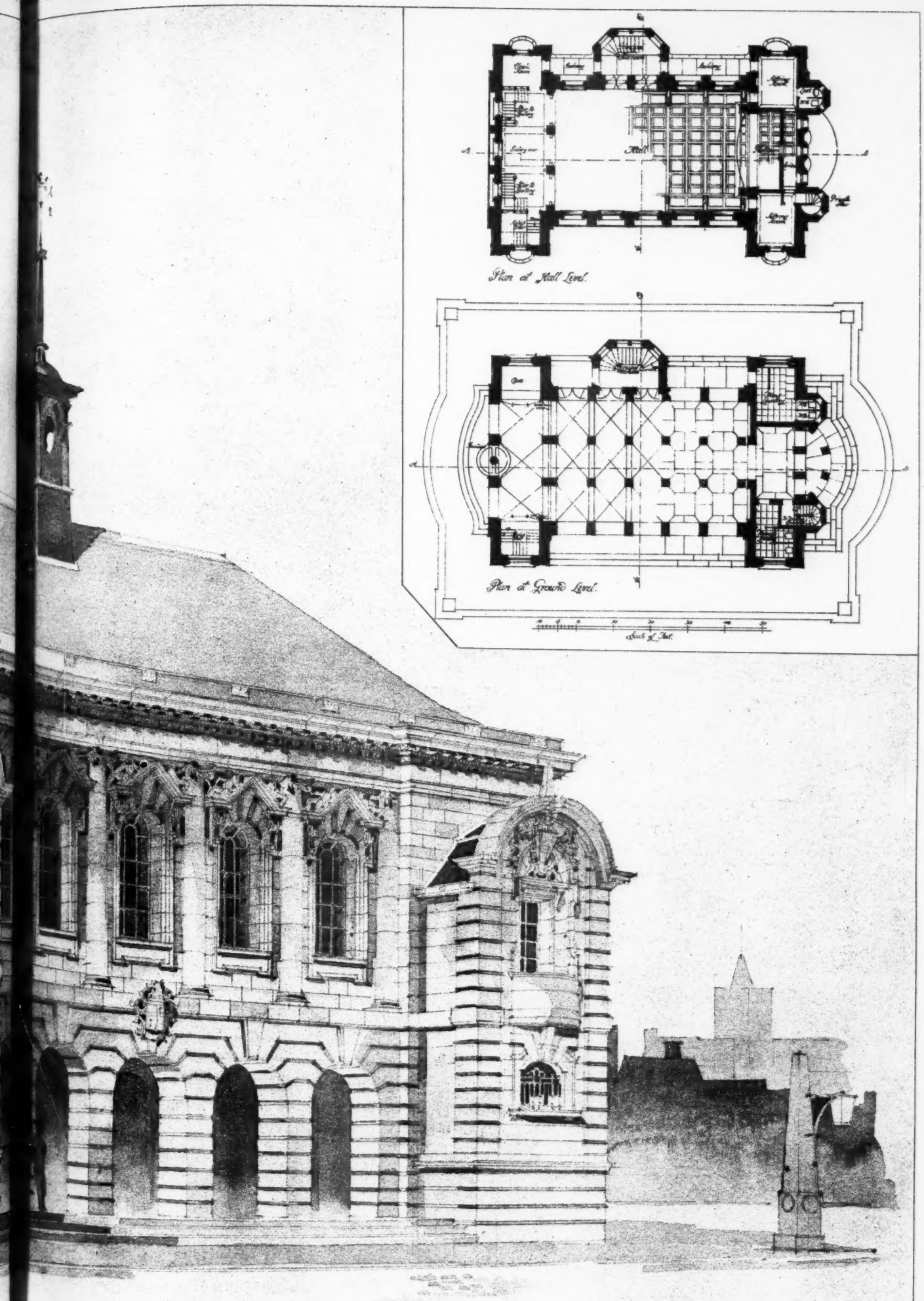
NO SOLDER. NO EXTERNAL FASTENINGS.

Particulars on Application. Chief Offices: Fitzroy Works, EUSTON ROAD, LONDON, N.W.



Soane Medallion, 1897.

DESIGN FOR A MARKET H[illegible] MR. J. A. R[illegible]



Plan at Hall Level.

Plan at Ground Level.

Scale of Feet.

INA- PHOTO. SPRAGUE & Co. 4 & 5 EAST HARDING STREET, FETTER LANE, E.C.

Mr. J. A. R. Inglis, A.R.I.B.A.

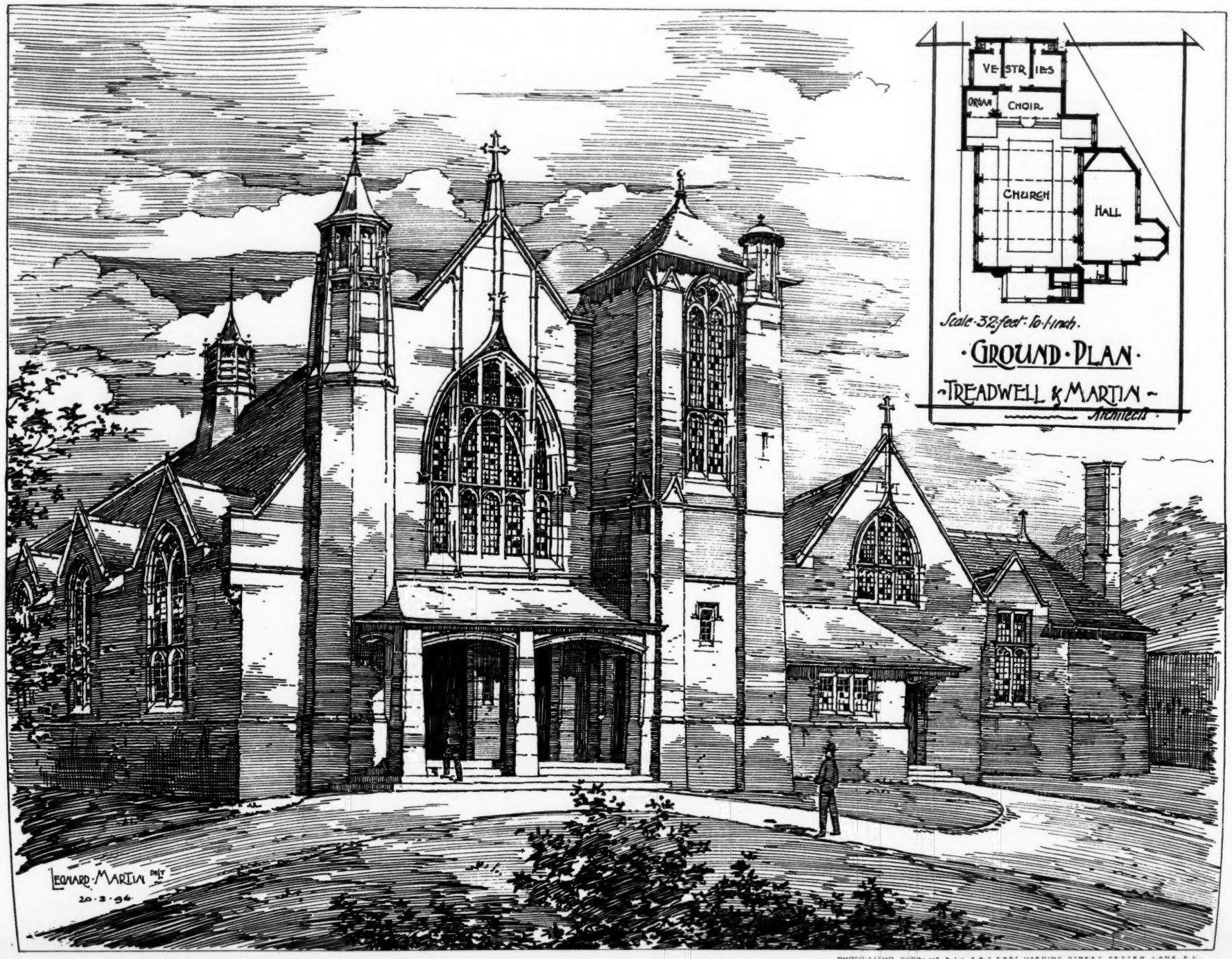
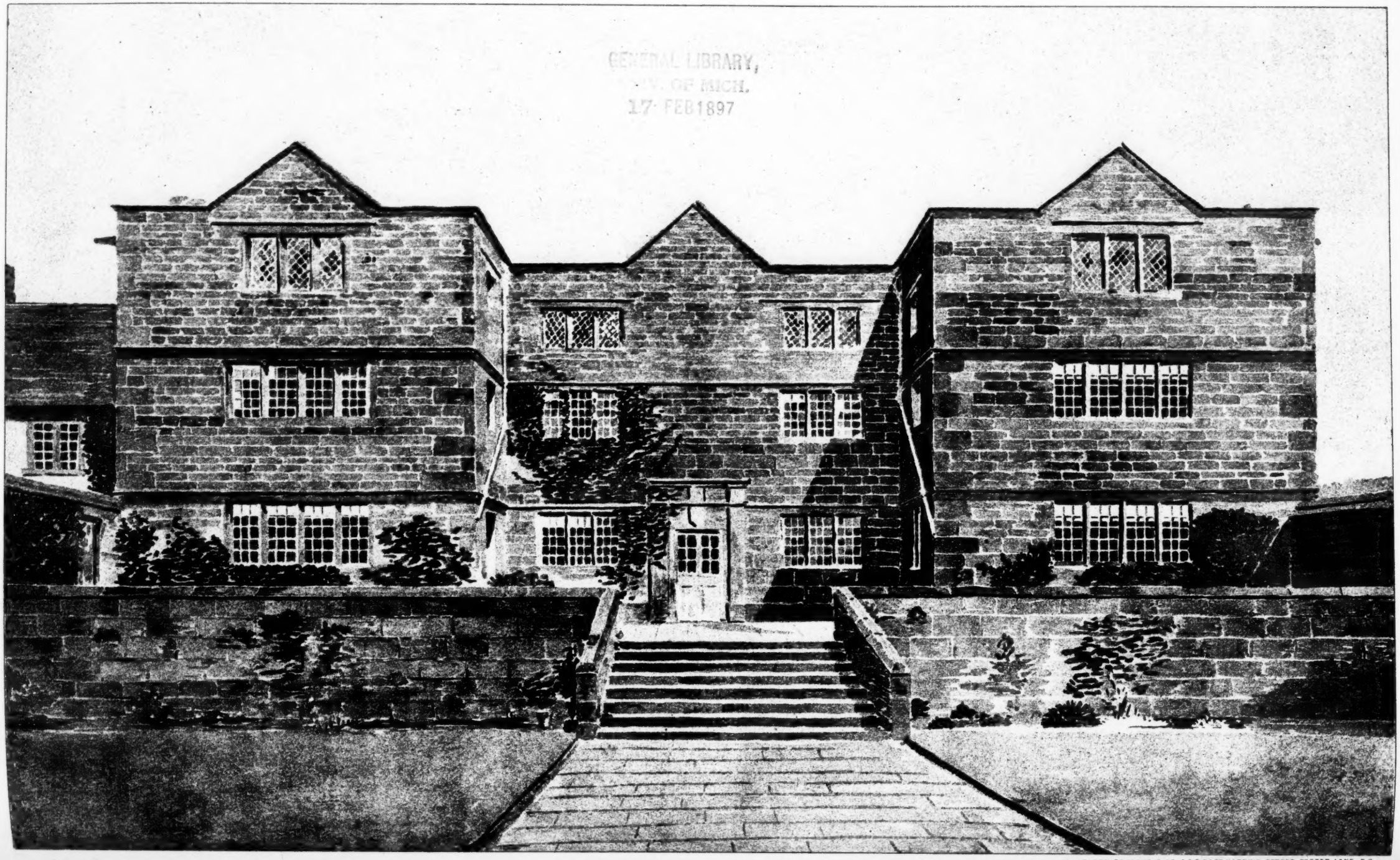


PHOTO-LITHO SIBRALUX & Co. 4 & 5 EAST HARDING STREET, FETTER LANE, E.C.

PRESBYTERIAN CHURCH, COURT ROAD, WEST NORWOOD. MESSRS. TREADWELL & MARTIN, ARCHITECTS.

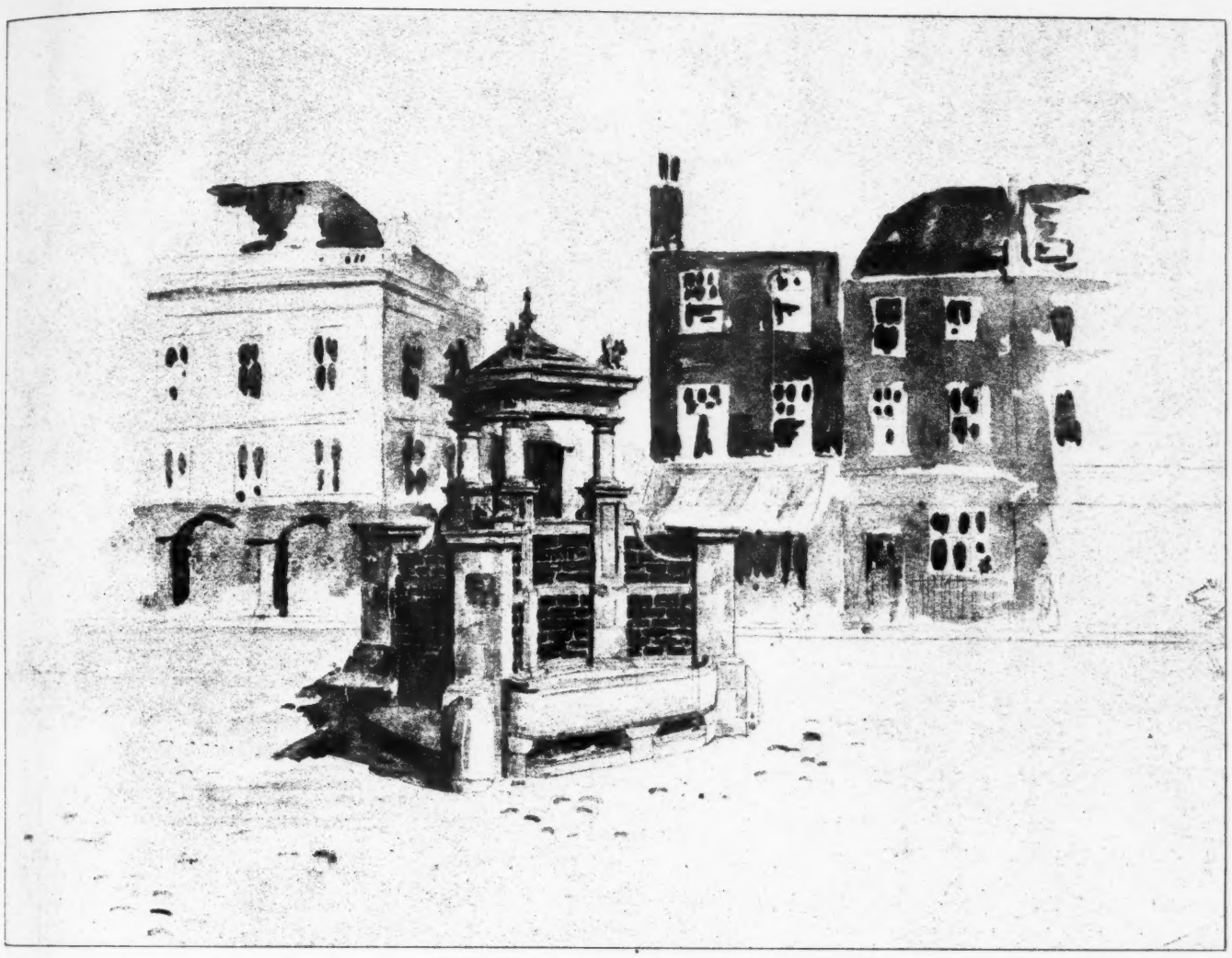
PRESBYTERIAN CHURCH, COURT ROAD, WEST NORWOOD.—MESSRS. TREADWELL & MARTIN, ARCHITECTS.

GENERAL LIBRARY,
U. OF MICH.
17 FEB 1897

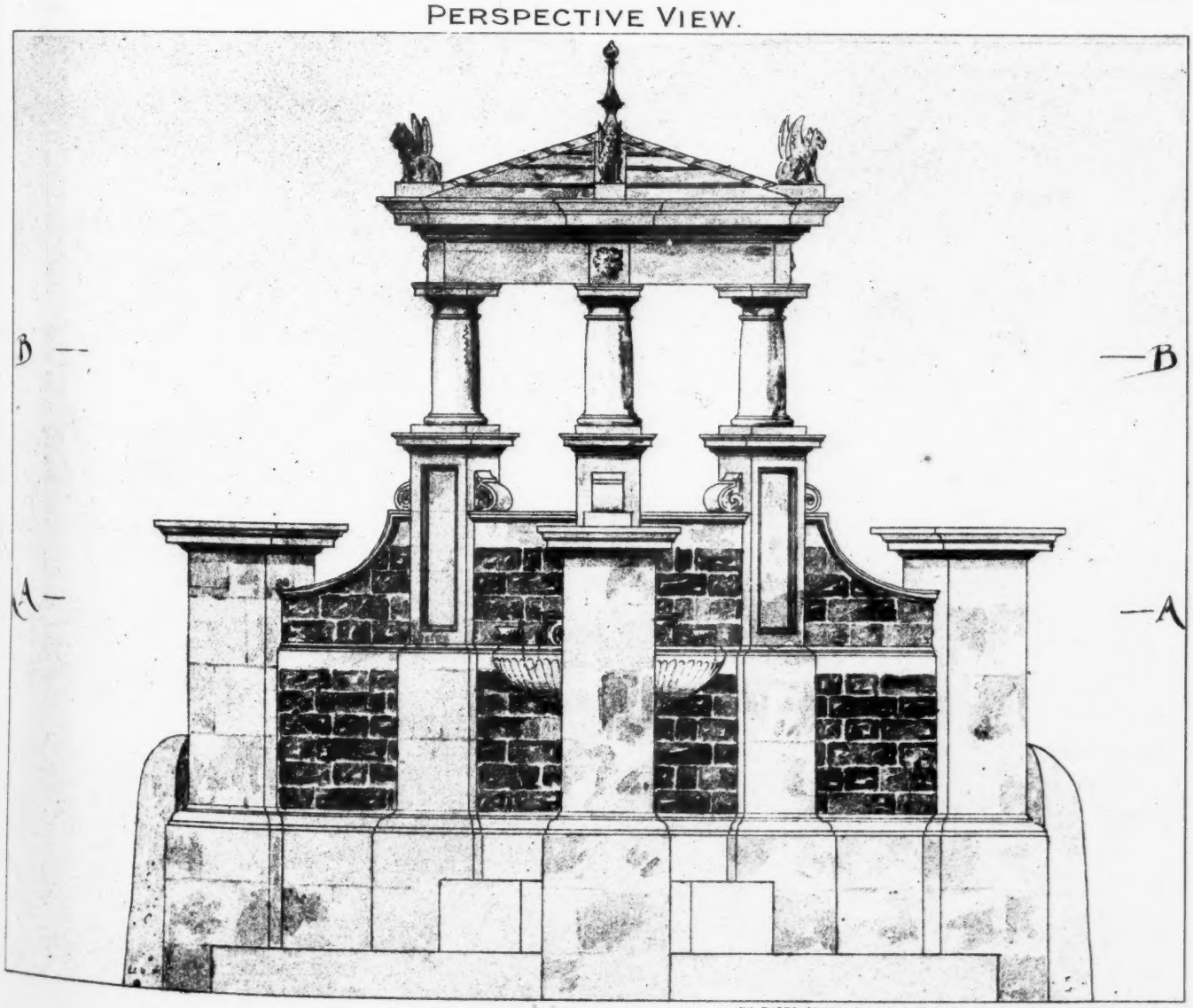


INK-PHOTO. SPRAGUE & CO. 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

EYAM HALL, DERBYSHIRE.—From a Drawing by Mr. F. H. Cheetham.



PERSPECTIVE VIEW.



ELEVATION.

INK-PHOTO. SPRAGUE & Co. 4 & 5 EAST HARDING STREET FETTER LANE, E.C.

SELECTED DESIGN IN COMPETITION FOR A FOUNTAIN.—BY MR. HUGH MACINTOSH.

EYAM HALL, DERBYSHIRE.—FROM A DRAWING BY MR. F. H. CHEETHAM.

PHOTO-LITHO. SPRAGUE & Co. 4 & 5 EAST HARDING STREET FETTER LANE E.C.

INTERIOR, GRAY'S INN CHAPEL: AS RESTORED.—Mr. C. J. Shoppee, F.R.I.B.A., Architect.

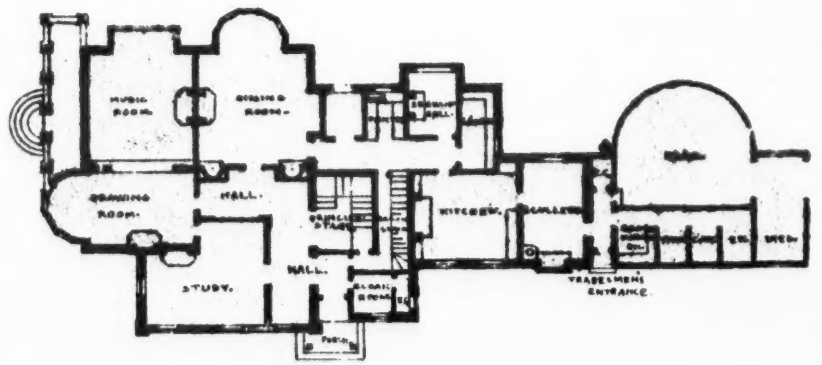
"THE HEIGHTS" MINDHEAD.

Mr W.A. Pite, F.R.I.B.A., Architect.

EAST ELEVATION.

SOUTH ELEVATION.

GROUND PLAN.



INK-PHOTO. SPRAGUE & Co 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.